Le Service Documentation de l'EHESP édite mensuellement un bulletin de veille. Celui-ci signale les articles récents, parus dans des revues scientifiques de renommée internationale, autour de 12 pathologies graves, ainsi que sur la pandémie grippale. Ce bulletin signale également des rapports officiels et institutionnels disponibles en texte intégral.

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Ce bulletin de veille est une publication mensuelle qui recueille les publications scientifiques autour des pathologies suivantes :

- Bronchite chronique obstructive
- Cancer du poumon
- Dengue
- Dépression
- Diabète
- Grippe A
- Maladie d’Alzheimer
- Maladies cardio-vasculaires
- Maladies liées à l’alcool
- Paludisme
- Pathologies liées à l’obésité
- Pathologies liées au tabagisme
- SIDA
- Tuberculose

La recherche documentaire est effectuée dans la base de données Medline et porte sur les 12 titres de revues suivants :

- American journal of epidemiology
- American journal of public health
- BMC public health
- BMJ (Clinical research ed.) - British medical journal
- International journal of epidemiology
- JAMA : the journal of the American Medical Association
- Lancet
- Nature
- Risk analysis : an official publication of the Society for Risk Analysis
- Science
- Social science & medicine
- The New England journal of medicine

Des rapports officiels et institutionnels en ligne sont également signalés en fin de bulletin.
### Articles scientifiques issus de l'interrogation de la base Medline (interrogée le 27/02/2012)

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**Articles scientifiques**

**Bronchite chronique obstructive**


**OBJECTIVE:** Physicians have provided care to only 0.2 million of the 5.3 million Japanese over the age of 40 years old who have chronic obstructive pulmonary disease (COPD). Among such individuals, many patients with respiratory symptoms diagnosed as chronic bronchitis (CB) are prescribed mainly expectorants. To determine the current status of COPD subjects diagnosed with and treated for CB, we investigated the prevalence of airflow limitation (AFL) in CB patients diagnosed by general practitioners (GPs) and the therapies administered to them. **METHODS:** Patients receiving treatment by GPs as CB completed a questionnaire and the FEV(1)/FEV(6) ratio was measured by their GPs with a Piko-6. The prevalence of AFL (FEV(1)/FEV(6) <73%) and the correlation between FEV(1)/FEV(6) and FEV(1)/FVC were examined. Prescription behavior and comorbid lifestyle diseases were also examined. **RESULTS:** Data from 197 patients with CB were analyzed. Among those who underwent spirometry, the correlation between FEV(1)/FVC and FEV(1)/FEV(6) was r(2)=0.38 (p<0.0001), and the sensitivity and specificity of the Piko-6 were 85.7% and 61.1%, respectively. The prevalence of AFL was 47.2% and increased to 54.1% among patients aged 70-79 years. Expectorants were prescribed for 39.8% of CB patients with AFL, but inhaled bronchodilators were prescribed for only 22.6%. Smoking history and age were significantly higher in the group with AFL than in those without AFL (p<0.05). The prevalence of comorbid lifestyle diseases was 73.1% in patients with AFL. **CONCLUSION:** AFL was prevalent among patients with CB. Therefore, GPs should test pulmonary function in CB patients to ensure that the appropriate therapy is administered


**OBJECTIVE:** Lipopolysaccharides (LPS) activates several signaling pathways in macrophages including mitogen-activated protein kinases (MAPK). Previous studies have investigated effect of LPS on MAPK activation in macrophage of normal rats. In the current study, we investigated the effect of LPS exposure on activation of MAPK in alveolar macrophage (AM) of chronic bronchitis (CB) rats and researched the corresponding cyclooxygenase-2 (COX-2), prostaglandins-2 (PGE(2)) and transforming growth factor- beta (TGF-beta) production and their MAPK signal pathways. **METHODS:** CB model was established by injection of Bacillus Calmette-Guerin (BCG) and LPS in rats. Special inhibitors of p38, extracellular signal-regulated kinase (ERK) and c-Jun-N-terminal kinases (JNK) MAPK signal pathways were used to determine the effect of MAPK activation on COX-2, PGE(2), TGF-beta production in AM of CB rats via RT-PCR, western blotting, radioimmunoassay and ELISA. Key FINDINGS: Synthesis of PGE(2) from AM of CB rats was increased and suppressed by either PD98059 or SB203580. SB203580 and PD98059, (inhibitors of ERK and p38 MAPK), could significantly inhibit COX-2 mRNA and protein expression. Moreover, ERK and p38 MAPK had synergistic effect on COX-2 expression. Inhibitor of ERK MAPK signal transduction could inhibit TGF-beta expression in AM. **CONCLUSION:** These results demonstrated COX-2, PGE(2) and TGF-beta productions in AM of CB rats were significantly increased, which might be regulated by the different MAPK signaling pathway.
Cancer du poumon


(2) MANI N, SLEVIN N, HUDSON A. **What Three Wise Men have to say about diagnosis.** BMJ. 2011, vol. 343, p.d7769


Metastatic progression of cancer is a complex and clinically daunting process. We previously identified a set of human microRNAs (miRNAs) that robustly suppress breast cancer metastasis to lung and bone and which display expression levels that predict human metastasis. Although these findings revealed miRNAs as suppressors of cell-autonomous metastatic phenotypes, the roles of non-coding RNAs in non-cell-autonomous cancer progression processes remain unknown. Here we reveal that endogenous miR-126, an miRNA silenced in a variety of common human cancers, non-cell-autonomously regulates endothelial cell recruitment to metastatic breast cancer cells, in vitro and in vivo. It suppresses metastatic endothelial recruitment, metastatic angiogenesis and metastatic colonization through coordinate targeting of IGFBP2, PITPNC1 and MERTK—novel pro-angiogenic genes and biomarkers of human metastasis. Insulin-like growth factor binding protein 2 (IGFBP2) secreted by metastatic cells recruits endothelia by modulating IGF1-mediated activation of the IGF type-I receptor on endothelial cells; whereas c-Mer tyrosine kinase (MERTK) receptor cleaved from metastatic cells promotes endothelial recruitment by competitively antagonizing the binding of its ligand GAS6 to endothelial MERTK receptors. Co-injection of endothelial cells with breast cancer cells non-cell-autonomously rescues their miR-126-induced metastatic defect, revealing a novel and important role for endothelial interactions in metastatic initiation. Through loss-of-function and epistasis experiments, we delineate an miRNA regulatory network’s individual components as novel and cell-extrinsic regulators of endothelial recruitment, angiogenesis and metastatic colonization. We also identify the IGFBP2/IGF1/IGF1R and GAS6/MERTK signalling pathways as regulators of cancer-mediated endothelial recruitment. Our work further reveals endothelial recruitment and endothelial interactions in the tumour microenvironment to be critical features of metastatic breast cancer

(4) HAYDEN EC. **Targeted treatment tested as potential cancer cure.** Nature. 2011 Nov. 17, vol. 479, n° 7373, p.281


Lagging exposure information is often undertaken to allow for a latency period in cumulative exposure-disease analyses. The authors first consider bias and confidence interval coverage when using the standard approaches of fitting models under several lag assumptions and selecting the lag that maximizes either the effect estimate or model goodness of fit. Next, they consider bias that occurs when the assumption that the latency period is a fixed constant does not hold. Expressions were derived for bias due to misspecification of lag assumptions, and simulations were conducted. Finally, the authors describe a method for joint estimation of
parameters describing an exposure-response association and the latency distribution. Analyses of associations between cumulative asbestos exposure and lung cancer mortality among textile workers illustrate this approach. Selecting the lag that maximizes the effect estimate may lead to bias away from the null; selecting the lag that maximizes model goodness of fit may lead to confidence intervals that are too narrow. These problems tend to increase as the within-person exposure variation diminishes. Lagging exposure assignment by a constant will lead to bias toward the null if the distribution of latency periods is not a fixed constant. Direct estimation of latency periods can minimize bias and improve confidence interval coverage.

**Dengue**


**Diabète**

(1) BURKI TK. **FDA rejects novel diabetes drug over safety fears.** Lancet. 2012 Feb. 11, vol. 379, n° 9815, p.507

(2) BRAUNWALD E. **Differences in an author's conflict of interest disclosures.** JAMA. 2012 Feb. 8, vol. 307, n° 6, p.561

(3) MITKA M. **Heart disease and stroke deaths fall, but some fear a reverse in the trend.** JAMA. 2012 Feb. 8, vol. 307, n° 6, pp.550, 552


BACKGROUND: The 65-kD isoform of glutamic acid decarboxylase (GAD65) is a major autoantigen in type 1 diabetes. We hypothesized that alum-formulated GAD65 (GAD-alum) can preserve beta-cell function in patients with recent-onset type 1 diabetes. METHODS: We studied 334 patients, 10 to 20 years of age, with type 1 diabetes, fasting C-peptide levels of more than 0.3 ng per milliliter (0.1 nmol per liter), and detectable serum GAD65 autoantibodies. Within 3 months after diagnosis, patients were randomly assigned to receive one of three study treatments: four doses of GAD-alum, two doses of GAD-alum followed by two doses of placebo, or four doses of placebo. The primary outcome was the change in the stimulated serum C-peptide level (after a mixed-meal tolerance test) between the baseline visit and the 15-month visit. Secondary outcomes included the glycated hemoglobin level, mean daily insulin dose, rate of hypoglycemia, and fasting and maximum stimulated C-peptide levels. RESULTS: The stimulated C-peptide level declined to a similar degree in all study groups, and the primary outcome at 15 months did not differ significantly between the combined active-drug groups and the placebo group (P=0.10). The use of GAD-alum as compared with placebo did not affect the insulin dose, glycated hemoglobin level, or hypoglycemia rate. Adverse events were infrequent and mild in the three groups, with no significant differences. CONCLUSIONS: Treatment with GAD-alum did not significantly reduce the
loss of stimulated C peptide or improve clinical outcomes over a 15-month period. (Funded by Diamyd Medical and the Swedish Child Diabetes Foundation; ClinicalTrials.gov number, NCT00723411.)


BACKGROUND: Lifestyle change is probably the most important single action to prevent type 2 diabetes mellitus. The purpose of this study was to assess the effects of a low-intensity individual lifestyle intervention by a physician and compare this to the same physician intervention combined with an interdisciplinary, group-based approach in a real-life setting. METHODS: The "Finnish Diabetes Risk score" (FINDRISC) was used by GPs to identify individuals at high risk. A randomised, controlled design and an 18 month follow-up was used to assess the effect of individual lifestyle counselling by a physician (individual physician group, (IG)) every six months, with emphasis on diet and exercise, and compare this to the same individual lifestyle counselling combined with a group-based interdisciplinary program (individual and interdisciplinary group, (IIG)) provided over 16 weeks. Primary outcomes were changes in lifestyle indicated by weight reduction >= 5%, improvement in exercise capacity as assessed by VO2 max and diet improvements according to the Smart Diet Score (SDS). RESULTS: 213 participants (104 in the IG and 109 in the IIG group, 50% women), with a mean age of 46 and mean body mass index 37, were included (inclusion rate > 91%) of whom 182 returned at follow-up (drop-out rate 15%). There were no significant differences in changes in lifestyle behaviours between the two groups. At baseline 57% (IG) and 53% (IIG) of participants had poor aerobic capacity and after intervention 35% and 33%, respectively, improved their aerobic capacity at least one metabolic equivalent. Unhealthy diets according to SDS were common in both groups at baseline, 61% (IG) and 60% (IIG), but uncommon at follow-up, 17% and 10%, respectively. At least 5% weight loss was achieved by 35% (IG) and 28% (IIG). In the combined IG and IIG group, at least one primary outcome was achieved by 93% while all primary outcomes were achieved by 6%. Most successful was the 78% reduction in the proportion of participants with unhealthy diet (almost 50% absolute reduction). CONCLUSION: It is possible to achieve important lifestyle changes in persons at risk for type 2 diabetes with modest clinical efforts. Group intervention yields no additional effects. The design of the study, with high inclusion and low dropout rates, should make the results applicable to ordinary clinical settings. TRIAL REGISTRATION: ClinicalTrials.gov: NCT00202748


OBJECTIVE: To assess the effect of targeting intensive glycaemic control versus conventional glycaemic control on all cause mortality and cardiovascular mortality, non-fatal myocardial infarction, microvascular complications, and severe hypoglycaemia in patients with type 2 diabetes. DESIGN: Systematic review with meta-analyses and trial sequential analyses of randomised trials. DATA SOURCES: Cochrane Library, Medline, Embase, Science Citation Index Expanded, LILACS, and CINAHL to December 2010; hand search of reference lists and conference proceedings; contacts with authors, relevant pharmaceutical companies, and the US Food and Drug Administration. STUDY SELECTION: Randomised clinical trials comparing targeted intensive glycaemic control with conventional glycaemic control in patients with type 2 diabetes. Published and unpublished trials in all languages were included, irrespective of predefined outcomes. DATA EXTRACTION: Two reviewers independently assessed studies for inclusion and extracted data related to study methods, interventions, outcomes, risk of bias, and
adverse events. Risk ratios with 95% confidence intervals were estimated with fixed and random effects models. RESULTS: Fourteen clinical trials that randomised 28,614 participants with type 2 diabetes (15,269 to intensive control and 13,345 to conventional control) were included. Intensive glycaemic control did not significantly affect the relative risks of all cause (1.02, 95% confidence interval 0.91 to 1.13; 28,359 participants, 12 trials) or cardiovascular mortality (1.11, 0.92 to 1.35; 28,359 participants, 12 trials). Trial sequential analyses rejected a relative risk reduction above 10% for all cause mortality and showed insufficient data on cardiovascular mortality. The risk of non-fatal myocardial infarction may be reduced (relative risk 0.85, 0.76 to 0.95; P=0.004; 28,111 participants, 8 trials), but this finding was not confirmed in trial sequential analysis. Intensive glycaemic control showed a reduction of the relative risks for the composite microvascular outcome (0.88, 0.79 to 0.97; P=0.01; 25,600 participants, 3 trials) and retinopathy (0.80, 0.67 to 0.94; P=0.009; 10,793 participants, 7 trials), but trial sequential analyses showed that sufficient evidence had not yet been reached. The estimate of an effect on the risk of nephropathy (relative risk 0.83, 0.64 to 1.06; 27,769 participants, 8 trials) was not statistically significant. The risk of severe hypoglycaemia was significantly increased when intensive glycaemic control was targeted (relative risk 2.39, 1.71 to 3.34; 27,844 participants, 9 trials); trial sequential analysis supported a 30% increased relative risk of severe hypoglycaemia. CONCLUSION: Intensive glycaemic control does not seem to reduce all cause mortality in patients with type 2 diabetes. Data available from randomised clinical trials remain insufficient to prove or refute a relative risk reduction for cardiovascular mortality, non-fatal myocardial infarction, composite microvascular complications, or retinopathy at a magnitude of 10%. Intensive glycaemic control increases the relative risk of severe hypoglycaemia by 30%


BACKGROUND: The aim of this prospective study was to determine the incidence of type 1 diabetes mellitus in 15-34-year-aged Lithuanian males and females during 1


BACKGROUND: The rate of macrosomia (birth weight>/=4, 000 g) increased over the past four decades in many parts of the world. Macrosomia is associated not only with higher risks of maternal and neonatal complications but also with health risks in adulthood. We examined trends in neonatal macrosomia and large-for-gestational-age (LGA) births among singleton, live, term and postterm births (>/>=37 complete weeks' gestation) in southeast China from 1994 to 2005 and explored possible causes of the temporal trends. METHODS: Data from Perinatal Health Care Surveillance System in 12 cities and counties in southeast China were analyzed for trends in birth weight, neonatal macrosomia and LGA from 1994 to 2005. A total of 594, 472 singleton live births were included. We conducted multiple logistic regression analyses to relate these trends to changes in maternal and pregnancy characteristics. RESULTS: The rate of macrosomia rose from 6.00% in 1994 to 8.49% in 2000 and then levelled off to 7.83% in 2005. Similar trends were observed in mean birth weight. The incidence of LGA births increased continuously from 13.72%
in 1994 to 18.08% in 2000, but the LGA rate remained relatively stable from 2002 to 2005. There was a decrease in gestational age and a significant increase in frequency of prelabor caesarean delivery from 1994 to 2005. In an adjusted multivariable model, the increase in LGA rate from 1994 to 2000 was associated with increasing net gestational weight gain, maternal age, maternal height and maternal education. But they didn’t fully explain the increase. The trends of 2002-2005 LGA declined after adjusted for maternal and neonatal characteristics. CONCLUSIONS: In southeast China, the incidence of macrosomia increased from 1994 to 2000 was mainly related to increasing net gestational weight gain. The incidence of macrosomia has levelled off in recent years partly due to increasing use of prelabor caesarean delivery and earlier delivery and partly due to moderation of gestational weight gain


BACKGROUND: Prehypertension and prediabetes are major risk factors of cardiovascular disease, and their combined presence may result in more serious cardiovascular outcomes than expected with either prehypertension or prediabetes alone. The aim of the present study was to evaluate the prevalence of coexisting prehypertension and prediabetes, and the associated risk profiles in a Chinese population. METHODS: A cross-sectional survey in a representative sample of 3,595 men and 4,593 women aged 18 years and older was performed between 2008 and 2010. Prehypertension and prediabetes were diagnosed using the guidelines from the Seventh Report of the Joint National Committee on prevention, detection, and treatment of high blood pressure and American Diabetes Association, respectively. Prehypertension was defined as a systolic blood pressure of 120-139 mmHg and/or diastolic blood pressure of 80-89 mmHg, and prediabetes was defined as a fasting blood glucose of 5.6-6.9 mmol/L. RESULTS: The prevalence of coexisting prehypertension and prediabetes was 11.0%. Men had a higher prevalence of coexisting prehypertension and prediabetes than women (14.2% vs. 8.4%; P < 0.0001). This prevalence increased with age and body mass index, and was the lowest among Mongolian-Chinese (5.1%). A multivariate analysis showed that gamma-glutamyltransferase and uric acid were significantly and positively correlated with body mass index, waist circumference, blood pressure, triglycerides, and total cholesterol, and negatively correlated with high density lipoprotein cholesterol in subjects with prehypertension and prediabetes. CONCLUSIONS: There is a large proportion of Chinese adults with coexisting prehypertension and prediabetes. Thus, there is a need for more efforts that implement public health programs that target the earlier stages of hypertension and diabetes


BACKGROUND: Self-treatment is a treatment of oneself without professional help, which may cause health-related consequences. This investigation examined the self-treatment behaviors in patients with diabetes mellitus in Iran/kashan. METHODS: The patients who referred to the clinic of diabetes and those who were admitted to the General hospital in the city of Kashan due to diabetes mellitus were asked to participate in this cross-sectional study. For data collection, The 25 item questionnaire of Likert scale type with four scales was used. Factor analysis was performed to define the patterns of self-treatment. RESULTS: 398 patients participated in the study. The mean age of the study population was 54.9 +/- 12.9 years. The majority (97%) had type 2 diabetes. 50% of patients reported self- treatment. The self-treatment score was 45.8 +/- 8.8 (25-100). Female gender, lower education and co-morbid illnesses of hypertension, hyperlipidemia and cardiac disease had significant relationship with self-treatment. The factor analysis procedure revealed seven factors that explained the 43% of variation in the self-treatment. These seven factors were categorized as knowledge, deficiencies of formal treatments, available self-treatment methods, physician related factors, the tendency to use herbal remedies, underlying factors such as gender and factors related to diabetes. CONCLUSIONS: There is a
medium tendency for self-treatment in diabetic patients. The assessment of self-treatment practices must be an essential part of patients' management in diabetes care


BACKGROUND: The aim of this work was to examine the prevalence of different metabolic phenotypes of obesity, and to analyze, by using different risk scores, how the metabolic syndrome (MetS) definition discriminates between unhealthy and healthy metabolic phenotypes in different obesity classes. METHODS: The Finnish type 2 diabetes (FIN-D2D) survey, a part of the larger implementation study, was carried out in 2007. The present cross-sectional analysis comprises 2,849 individuals aged 45-74 years. The MetS was defined with the new Harmonization definition. Cardiovascular risk was estimated with the Framingham and SCORE risk scores. Diabetes risk was assessed with the FINDRISK score. Non-alcoholic fatty liver disease (NAFLD) was estimated with the NAFLD score. Participants with and without MetS were classified in different weight categories and analysis of regression models were used to test the linear trend between body mass index (BMI) and various characteristics in individuals with and without MetS; and interaction between BMI and MetS. RESULTS: A metabolically healthy but obese phenotype was observed in 9.2% of obese men and in 16.4% of obese women. The MetS-BMI interaction was significant for fasting glucose, 2-hour plasma glucose, fasting plasma insulin and insulin resistance (HOMA-IR)(p < 0.001 for all). The prevalence of total diabetes (detected prior to or during survey) was 37.0% in obese individuals with MetS and 4.3% in obese individuals without MetS (p < 0.001). MetS-BMI interaction was significant (p < 0.001) also for the Framingham 10 year CVD risk score, NAFLD score and estimated liver fat %, indicating greater effect of increasing BMI in participants with MetS compared to participants without MetS. The metabolically healthy but obese individuals had lower 2-hour postload glucose levels (p = 0.0030), lower NAFLD scores (p < 0.001) and lower CVD risk scores (Framingham, p < 0.001; SCORE, p = 0.002) than normal weight individuals with MetS. CONCLUSIONS: Undetected Type 2 diabetes was more prevalent among those with MetS irrespective of the BMI class and increasing BMI had a significantly greater effect on estimates of liver fat and future CVD risk among those with MetS compared with participants without MetS. A healthy obese phenotype was associated with a better metabolic profile than observed in normal weight individuals with MetS

Dépression


   **OBJECTIVE:** To assess whether maternal use of selective serotonin reuptake inhibitors (SSRIs) increases the risk of persistent pulmonary hypertension in the newborn, and whether such an effect might differ between specific SSRIs. **DESIGN:** Population based cohort study using data from the national health registers. **SETTING:** Denmark, Finland, Iceland, Norway, and Sweden, 1996-2007. **PARTICIPANTS:** More than 1.6 million infants born after gestational week 33. **MAIN OUTCOME MEASURES:** Risks of persistent pulmonary hypertension of the newborn associated with early and late exposure to SSRIs during pregnancy and adjusted for important maternal and pregnancy characteristics. Comparisons were made between infants exposed and not exposed to SSRIs. **RESULTS:** Around 30 000 women had used SSRIs during pregnancy and 11 014 had been dispensed an SSRI later than gestational week 20. Exposure to SSRIs in late pregnancy was associated with an increased risk of persistent pulmonary hypertension in the newborn: 33 of 11 014 exposed infants (absolute risk 3 per 1000 liveborn infants compared with the background incidence of 1.2 per 1000); adjusted odds ratio 2.1 (95% confidence interval 1.5 to 3.0). The increased risks of persistent pulmonary hypertension in the newborn for each of the specific SSRIs (sertraline, citalopram, paroxetine, and fluoxetine) were of similar magnitude. Filling a prescription with SSRIs before gestational week 8 yielded slightly increased risks: adjusted odds ratio 1.4 (95% confidence interval 1.0 to 2.0). **CONCLUSIONS:** The risk of persistent pulmonary hypertension of the newborn is low, but use of SSRIs in late pregnancy increases that risk more than twofold. The increased risk seems to be a class effect


(10) LEDFORD H. **Depression drug disappoints.** Nature. 2011 Nov. 17, vol. 479, n° 7373, p.278


   **BACKGROUND:** There is limited evidence that interventions for depression and other common mental disorders (CMD) can be integrated sustainably into primary health care in Africa. We aimed to pilot a low-cost multi-component ‘Friendship Bench Intervention’ for CMD, locally
adapted from problem-solving therapy and delivered by trained and supervised female lay workers to learn if was feasible and possibly effective as well as how best to implement it on a larger scale. METHOD: We trained lay workers for 8 days in screening and monitoring CMD and in delivering the intervention. Ten lay workers screened consecutive adult attenders who either were referred or self-referred to the Friendship Bench between July and December 2007. Those scoring above the validated cut-point of the Shona Symptom Questionnaire (SSQ) for CMD were potentially eligible. Exclusions were suicide risk or very severe depression. All others were offered 6 sessions of problem-solving therapy (PST) enhanced with a component of activity scheduling. Weekly nurse-led group supervision and monthly supervision from a mental health specialist were provided. Data on SSQ scores at 6 weeks after entering the study were collected by an independent research nurse. Lay workers completed a brief evaluation on their experiences of delivering the intervention. RESULTS: Of 395 potentially eligible, 33 (8%) were excluded due to high risk. Of the 362 left, 2% (7) declined and 10% (35) were lost to follow-up leaving an 88% response rate (n = 320). Over half (n = 166, 52%) had presented with an HIV-related problem. Mean SSQ score fell from 11.3 (sd 1.4) before treatment to 6.5 (sd 2.4) after 3-6 sessions. The drop in SSQ scores was proportional to the number of sessions attended. Nine of the ten lay workers rated themselves as very able to deliver the PST intervention. CONCLUSION: We have found preliminary evidence of a clinically meaningful improvement in CMD associated with locally adapted problem-solving therapy delivered by lay health workers through routine primary health care in an African setting. There is a need to test the effectiveness of this task-shifting mental health intervention in an appropriately powered randomised controlled trial. TRIAL REGISTRATION: ISRCTN: ISRCTN25476759


BACKGROUND: Depressive symptoms and chronic disease have adverse effects on patients’ health-related quality of life (H-RQOL). However, little is known about this effect on H-RQOL when only the two core depressive symptoms - loss of interest and depressed mood - are considered. The objective of this study is to investigate H-RQOL in the presence of loss of interest and depressed mood at a general medical outpatient unit. METHODS: We evaluated 553 patients at their first attendance at a general medical outpatient unit of a teaching hospital. H-RQOL was assessed with the Medical Outcomes Study 36-item Short-Form Health Survey (SF-36). Depressed mood and loss of interest were assessed by the Primary Care Evaluation of Mental Disorders (PRIME-MD)-Patient Questionnaire. A physician performed the diagnosis of chronic diseases by clinical judgment and classified them in 13 possible pre-defined categories. We used multiple linear regression to investigate associations between each domain of H-RQOL and our two core depression symptoms. The presence of chronic diseases and demographic variables were included in the models as covariates. RESULTS: Among the 553 patients, 70.5% were women with a mean age of 41.0 years (range 18-85, SD +/- 15.4). Loss of interest was reported by 54.6%, and depressed mood by 59.7% of the patients. At least one chronic disease was diagnosed in 59.5% of patients; cardiovascular disease was the most prevalent, affecting 20.6% of our patients. Loss of interest and depressed mood was significantly associated with decreased scores in all domains of H-RQOL after adjustment for possible confounders. The presence of any chronic disease was associated with a decrease in the domain of vitality. The analysis of each individual chronic disease category revealed that no category was associated with a decrease in more than one domain of H-RQOL. CONCLUSION: Loss of interest and depressed mood were associated with significant decreases in H-RQOL. We recommend these simple tests for screening in general practice


BACKGROUND: Recent years have seen a number of attempts to reduce the stigma related to mental illness; the media can play a significant role in perpetuating this stigma. This paper
analyses trends in newspaper coverage of mental illness in the UK between 1992-2008 across a range of psychiatric diagnoses. METHODS: A content analysis was performed on a sample of articles (n = 1361) about mental illness in a range of UK newspapers in 1992, 2000, and 2008. RESULTS: There was a significant proportional reduction in negative articles about mental illness between 1992 and 2008, and a significant increase in articles explaining psychiatric disorders. Coverage improved for depression but remained largely negative for schizophrenia. CONCLUSIONS: Newspaper coverage of mental illness became less stigmatising overall in the 1990s and 2000s, but this was not true for all diagnoses.


BACKGROUND: Research about the relationship between premenstrual syndrome (PMS) and major depression is limited. This study examined the relationship between moderate to severe PMS and major depression in a population-based sample of women of reproductive age. The objectives of the study were to assess the association between premenstrual syndrome and major depression, to analyse how PMS and major depression differ and to characterise the group of women who report both PMS and major depression. METHODS: Data were obtained from the Swiss Health Survey 2007. Included in the analysis was data from women under the age of 55 without hysterectomy and who answered the questions on PMS symptoms. The population-based sample consisted of 3518 women. Weighted prevalence rates were calculated and relative risk ratios for PMS, major depression and women who reported both PMS and major depression, were calculated with logistic multinomial logit regression. RESULTS: The prevalence of major depression was 11.3% in women screening positive for moderate PMS and 24.6% in women screening positive for severe PMS. Compared to women without any of these conditions, women who reported moderate to severe alcohol consumption had a lower risk for PMS. Women reporting use of antidepressants, and use of oral contraceptives had a higher risk for major depression compared to women without any of these conditions. Women reporting work dissatisfaction had a higher risk for PMS. A higher relative risk to report both PMS and major depression compared to women without PMS or major depression was related to factors such as high psychological distress, low mastery, psychotropic drug consumption, and low self-rated health. CONCLUSIONS: The results suggested that women who suffer from both PMS and major depression are more impaired compared to women with only one disorder. The results further indicated that PMS and major depression are different disorders that can, however, co-occur


BACKGROUND: Cardiovascular risk factors (CVRF) were collected as part of a randomised controlled trial of a multi-component intervention to reduce smoking among male prisoners. Cross-sectional baseline data on CVRF were compared among smoking male prisoners and males of similar age in the general population. METHODS: 425 smoking prisoners were recruited (n = 407 in New South Wales; 18 in Queensland), including 15% of Aboriginal descent (mean age 33 years; median sentence length 3.6 years). We measured CVRF such as smoking, physical activity, blood pressure, risky alcohol use, symptoms of depression, and low socioeconomic status. RESULTS: We found that 39% of prisoners had 3+ CVRF, compared to 10% in a general community sample of most disadvantaged men of a similar age. Significantly more Aboriginal prisoners had 3+ CVRF than non-Aboriginal prisoners (55% vs 36%, p < 0.01) and were twice as likely to have 4+ CVRF (27% vs 12%). In addition to all prisoners in this study being a current smoker (with 70% smoking 20+ cigarettes per day), the prevalence of other CVRF was very high: insufficient physical activity (23%); hypertension (4%), risky drinking (52%), symptoms of depression (14%) and low socioeconomic status (SES) (44%). Aboriginal prisoners had higher levels of risky alcohol use, symptoms of depression, and were more likely to be of low SES. CONCLUSION: Prisoners are at high risk for developing cardiovascular disease compared to
even the most disadvantaged in their community and should be the focus of specific public health interventions. TRIAL REGISTRATION: This trial is registered with the Australian New Zealand Clinical Trials Registry ACTRN#12606000229572


BACKGROUND: Several studies have found a non-linear relationship between mental ill-health and BMI with higher rates in both the underweight and the obese. This study evaluated the shape of the relationship between BMI and distress, suicidal ideation and self-reported mental ill-health conditions in a large population sample. METHODS: Data were drawn from the South Australian Monitoring and Surveillance System (SAMSS) for the years 2002 to 2009 (n = 46,704). SAMSS monitors population trends in state and national risk factors and chronic diseases. Samples are drawn from all households with a functioning number in the Australian White Pages. Computer assisted telephone interviews collected information on self-reported height and weight, demographic and health behaviours. Respondents completed the Kessler Distress and suicidal ideation scales and reported specific mental ill-health conditions. BMI was categorized into deciles to allow for assessment of the shape of any associations with other variables. Logistic regression was used to examine associations between each mental ill-health condition and BMI-decile controlling for age in the base model. This was followed by a full model that added SES and the health-adverse coping behaviours of smoking, alcohol and physical activity to test for changes from the base model. RESULTS: Non-linear associations were observed between BMI-decile and mental ill-health but statistically significantly greater odds of mental ill-health were observed only in the obese and not in the underweight after controlling for age, health-adverse behaviours and socioeconomic status. The association between BMI and mental ill-health might best be described as ‘threshold’. Elevated odds were apparent for middle-aged persons, whereas younger and older individuals had a significantly lower odds of having a mental ill-health condition. CONCLUSIONS: In conclusion, this study has provided no support for the hypothesis of increased mental ill-health problems in the underweight but it has demonstrated the non-linear relationships between BMI and mental ill-health and between BMI and health-adverse behaviours. Non-linear relationships with BMI need to be recognized and addressed during analysis.

Etudes sur le tabagisme


CONTEXT: Human papillomavirus (HPV) infection is the principal cause of a distinct form of oropharyngeal squamous cell carcinoma that is increasing in incidence among men in the United States. However, little is known about the epidemiology of oral HPV infection. OBJECTIVE: To determine the prevalence of oral HPV infection in the United States. DESIGN, SETTING, AND PARTICIPANTS: A cross-sectional study was conducted as part of the National Health and Nutrition Examination Survey (NHANES) 2009-2010, a statistically representative sample of the civilian noninstitutionalized US population. Men and women aged 14 to 69 years examined at mobile examination centers were eligible. Participants (N = 5579) provided a 30-second oral rinse
and gargle with mouthwash. For detection of HPV types, DNA purified from oral exfoliated cells was evaluated by polymerase chain reaction and type-specific hybridization. Demographic and behavioral data were obtained by standardized interview. Statistical analyses used NHANES sample weights to provide weighted prevalence estimates for the US population. MAIN OUTCOME MEASURES: Prevalence of oral HPV infection. RESULTS: The prevalence of oral HPV infection among men and women aged 14 to 69 years was 6.9% (95% CI, 5.7%-8.3%) and of HPV type 16 was 1.0% (95% CI, 0.7%-1.3%). Oral HPV infection followed a bimodal pattern with respect to age, with peak prevalence among individuals aged 30 to 34 years (7.3%; 95% CI, 4.6%-11.4%) and 60 to 64 years (11.4%; 95% CI, 8.5%-15.1%). Men had a significantly higher prevalence than women for any oral HPV infection (10.1% [95% CI, 8.3%-12.3%] vs 3.6% [95% CI, 2.6%-5.0%], P < .001; unadjusted prevalence ratio [PR], 2.80 [95% CI, 2.02-3.88]). Infection was less common among those without vs those with a history of any type of sexual contact (0.9% [95% CI, 0.4%-1.8%] vs 7.5% [95% CI, 6.1%-9.1%], P < .001; PR, 8.69 [95% CI, 3.91-19.31]) and increased with number of sexual partners (P < .001 for trend) and cigarettes smoked per day (P < .001 for trend). Associations with age, sex, number of sexual partners, and current number of cigarettes smoked per day were independently associated with oral HPV infection in multivariable models. CONCLUSION: Among men and women aged 14 to 69 years in the United States, the overall prevalence of oral HPV infection was 6.9%, and the prevalence was higher among men than among women.

(4) STAFFORD N. Hanover bans e-cigarette use in civic offices amid calls for better safety data. BMJ. 2012, vol. 344, p.e3


BACKGROUND: Smokers need effective support to maximise the chances of successful quit attempts. Current smoking cessation medications, such as nicotine replacement therapy (NRT), bupropion, nortriptyline or varenicline, have been shown to be effective in clinical trials but are underused by smokers attempting to quit due to adverse effects, contraindications, low acceptability and/or high cost. Cytisine is a low-cost, plant-based alkaloid that has been sold as a smoking cessation aid in Eastern Europe for 50 years. A systematic review of trial evidence suggests that cytisine has a positive impact on both short- and long-term abstinence rates compared to placebo. However, the quality of the evidence is poor and insufficient for licensing purposes in many Western countries. A large, well-conducted placebo-controlled trial (n = 740) of cytisine for smoking cessation has recently been published and confirms the findings of earlier studies, with 12-month continuous abstinence rates of 8.4% in the cytisine group compared to 2.4% in the placebo group (Relative risk = 3.4, 95% confidence intervals 1.7-7.1). No research has yet been undertaken to determine the effectiveness of cytisine relative to that of NRT.

METHODS/DESIGN: A single-blind, randomised controlled, non-inferiority trial has been designed to determine whether cytisine is at least as effective as NRT in assisting smokers to remain abstinent for at least one month. Participants (n = 1,310) will be recruited through the national telephone-based Quitline service in New Zealand and randomised to receive a standard 25-day course of cytisine tablets (Tabex(R)) or usual care (eight weeks of NRT patch and/or gum or
lozenge). Participants in both study arms will also receive a behavioural support programme comprising an average of three follow-up telephone calls delivered over an eight-week period by Quitline. The primary outcome is continuous abstinence from smoking at one month, defined as not smoking more than five cigarettes since quit date. Outcome data will also be collected at one week, two months and six months post-quit date. DISCUSSION: Cytisine appears to be effective compared with placebo, and given its (current) relative low cost may be an acceptable smoking cessation treatment for smokers, particularly those in low- and middle-income countries. Cytisine's 'natural' product status may also increase its acceptability and use among certain groups of smokers, such as indigenous people, smokers in countries where the use of natural medicines is widespread (e.g., China, India), and in those people who do not want to use NRT or antidepressants to help them quit smoking. However it is important to ascertain the effectiveness of cytisine compared with that of existing cessation treatments. TRIAL REGISTRATION: Australian New Zealand Clinical Trials Registry (ACTRN12610000590066)


BACKGROUND: There is current controversy about the efficacy of smoking cessation interventions that are based on information obtained by spirometry. The objective of this study is to evaluate the effectiveness in the primary care setting of structured motivational intervention to achieve smoking cessation, compared with usual clinical practice. METHODS: DESIGN: Multicentre randomized clinical trial with an intervention and a control group. SETTING: 12 primary care centres in the province of Tarragona (Spain). SUBJECTS OF STUDY: 600 current smokers aged between 35 and 70 years with a cumulative habit of more than 10 packs of cigarettes per year, attended in primary care for any reason and who did not meet any of the exclusion criteria for the study, randomly assigned to structured intervention or standard clinical attention. INTERVENTION: Usual advice to quit smoking by a general practitioner as well as a 20-minute personalized visit to provide detailed information about spirometry results, during which FEV1, FVC, FEF 25-75% and PEF measurements were discussed and interpreted in terms of theoretical values. Additional information included the lung age index (defined as the average age of a non-smoker with the same FEV1 as the study participant), comparing this with the chronological age to illustrate the pulmonary deterioration that results from smoking. MEASUREMENTS: Spirometry during the initial visit. Structured interview questionnaire administered at the primary care centre at the initial visit and at 12-month follow-up. Telephone follow-up interview at 6 months. At 12-month follow-up, expired CO was measured in patients who claimed to have quit smoking. MAIN VARIABLES: Smoking cessation at 12 months. ANALYSIS: Data will be analyzed on the basis of “intention to treat” and the unit of analysis will be the individual smoker. EXPECTED RESULTS: Among active smokers treated in primary care we anticipate significantly higher smoking cessation in the intervention group than in the control group. DISCUSSION: Application of a motivational intervention based on structured information about spirometry results, improved abstinence rates among smokers seen in actual clinical practice conditions in primary care. TRIAL REGISTRATION: ClinicalTrials.gov, number NCT01194596

(9) BRYANT J, BONEVSKI B, PAUL C. A survey of smoking prevalence and interest in quitting among social and community service organisation clients in Australia: a unique opportunity for reaching the disadvantaged. BMC Public Health. 2011, vol. 11, p.827

BACKGROUND: Social and community service organisations (SCSOs) are non-government, not-for-profit organisations that provide welfare services to disadvantaged individuals. SCSOs hold considerable potential for providing smoking cessation support to disadvantaged smokers. This study aimed to establish the prevalence of smoking, interest in quitting and interest in receiving cessation support amongst clients accessing SCSOs. METHODS: Clients seeking financial or material assistance from three SCSOs in NSW, Australia, between February and October 2010
were invited to complete a 60-item general health touch screen computer survey. This included questions about smoking status, past quit attempts and interest in receiving support to quit smoking from SCSO staff. RESULTS: A total of 552 clients were approached to participate during the study period, of which 383 provided consent and completed the survey (69% consent rate). Daily smoking was reported by 53.5% of participants. Occasional smoking (non-daily smoking) was reported by a further 7.9% of participants. Most participants had tried to quit smoking in the past (77%) and had made an average of two quit attempts (SD = 3.2) lasting longer than 24 hours in the previous 12 months. More than half of all participants (52.8%) reported that they would like help from SCSO staff to quit smoking. For those interested in receiving help, the preferred types of help were access to free NRT (77%), cash rewards (52%) and non-cash rewards (47%) for quitting, and to receive support and encouragement from SCSO staff to quit (45%).

CONCLUSIONS: Smoking rates among clients accessing SCSO are substantially higher than the general population rate of 15.1%. A substantial proportion of clients are interested in quitting and want support from the SCSO to do so.


BACKGROUND: Variability in health behaviours is an important cause of socioeconomic health disparities. Socioeconomic differences in health behaviours are poorly understood. Previous studies have examined whether (single) stressors or psychosocial resources mediate the relationship between socioeconomic position and health or mortality. This study examined: 1) whether the presence of stressors and the absence of resources can be represented by a single underlying factor, and co-occur among those with lower education, 2) whether stressors and resources mediated the relation between education and health behaviours, and 3) addressed the question whether an aggregate measure of stressors and resources has an added effect over the use of individual measures. METHODS: Questionnaire data on sociodemographic variables, stressors, resources, and health behaviours were collected cross-sectionally among inhabitants (n = 3050) of a medium-sized Dutch city (Utrecht). Descriptive statistics and bootstrap analyses for multiple-mediator effects were used to examine the role of stressors and resources in mediating educational associations with health behaviours. RESULTS: Higher levels of stressors and lower levels of resources could be represented by a single underlying factor, and co-occurred among those with lower educational levels. Stressors and resources partially mediated the relationship between education and four health behaviours (exercise, breakfast frequency, vegetable consumption and smoking). Financial stress and poor perceived health status were mediating stressors, and social support a strong mediating resource. An aggregate measure of the stressors and resources showed similar associations with health behaviours compared to the summed individual measures. CONCLUSIONS: Lower educated groups are simultaneously affected by the presence of various stressors and absence of multiple resources, which partially explain socioeconomic differences in health behaviours. Compared to the direct associations of stressors and resources with health behaviours, the association with socioeconomic status was modest. Therefore, besides addressing structural inequalities, interventions promoting financial management, coping with chronic disease, and social skills training have the potential to benefit large parts of the population, most notably the lower educated. Further research is needed to clarify how stressors and resources impact health behaviours, why this differs between behaviours and how these disparities could be alleviated.


BACKGROUND: Cigarette smoking is a tough addiction to break. Therefore, improved approaches to smoking cessation are necessary. The electronic-cigarette (e-Cigarette), a battery-powered electronic nicotine delivery device (ENDD) resembling a cigarette, may help smokers to remain abstinent during their quit attempt or to reduce cigarette consumption. Efficacy and safety
of these devices in long-term smoking cessation and/or smoking reduction studies have never been investigated. METHODS: In this prospective proof-of-concept study we monitored possible modifications in smoking habits of 40 regular smokers (unwilling to quit) experimenting the 'Categoria' e-Cigarette with a focus on smoking reduction and smoking abstinence. Study participants were invited to attend a total of five study visits: at baseline, week-4, week-8, week-12 and week-24. Product use, number of cigarettes smoked, and exhaled carbon monoxide (eCO) levels were measured at each visit. Smoking reduction and abstinence rates were calculated. Adverse events and product preferences were also reviewed. RESULTS: Sustained 50% reduction in the number of cig/day at week-24 was shown in 13/40 (32.5%) participants; their median of 25 cigs/day decreasing to 6 cigs/day (p < 0.001). Sustained 80% reduction was shown in 5/40 (12.5%) participants; their median of 30 cigs/day decreasing to 3 cigs/day (p = 0.043). Sustained smoking abstinence at week-24 was observed in 9/40 (22.5%) participants, with 6/9 still using the e-Cigarette by the end of the study. Combined sustained 50% reduction and smoking abstinence was shown in 22/40 (55%) participants, with an overall 88% fall in cigs/day. Mouth (20.6%) and throat (32.4%) irritation, and dry cough (32.4%) were common, but diminished substantially by week-24. Overall, 2 to 3 cartridges/day were used throughout the study. Participants' perception and acceptance of the product was good. CONCLUSION: The use of e-Cigarette substantially decreased cigarette consumption without causing significant side effects in smokers not intending to quit (http://ClinicalTrials.gov number NCT01195597)


BACKGROUND: Cardiovascular risk factors (CVRF) were collected as part of a randomised controlled trial of a multi-component intervention to reduce smoking among male prisoners. Cross-sectional baseline data on CVRF were compared among smoking male prisoners and males of similar age in the general population. METHODS: 425 smoking prisoners were recruited (n = 407 in New South Wales; 18 in Queensland), including 15% of Aboriginal descent (mean age 33 years; median sentence length 3.6 years). We measured CVRF such as smoking, physical activity, blood pressure, risky alcohol use, symptoms of depression, and low socioeconomic status. RESULTS: We found that 39% of prisoners had 3+ CVRF, compared to 10% in a general community sample of most disadvantaged men of a similar age. Significantly more Aboriginal prisoners had 3+ CVRF than non-Aboriginal prisoners (55% vs 36%, p < 0.01) and were twice as likely to have 4+ CVRF (27% vs 12%). In addition to all prisoners in this study being a current smoker (with 70% smoking 20+ cigarettes per day), the prevalence of other CVRF was very high: insufficient physical activity (23%); hypertension (4%), risky drinking (52%), symptoms of depression (14%) and low socioeconomic status (SES) (44%). Aboriginal prisoners had higher levels of risky alcohol use, symptoms of depression, and were more likely to be of low SES. CONCLUSION: Prisoners are at high risk for developing cardiovascular disease compared to even the most disadvantaged in their community and should be the focus of specific public health interventions. TRIAL REGISTRATION: This trial is registered with the Australian New Zealand Clinical Trials Registry ACTRN#12606000229572


BACKGROUND: Accurate and timely regional data on smoking trends allow tobacco control interventions to be targeted at the areas most in need and facilitate the evaluation of such interventions. Electronic primary care databases have the potential to provide a valuable source of such data due to their size, continuity and the availability of socio-demographic data. UK electronic primary care data on smoking prevalence from The Health Improvement Network (THIN) have previously been validated at the national level, but may be less representative at the regional level due to reduced sample sizes. We investigated whether this database provides valid regional data and whether it can be used to compare smoking prevalence in different UK regions.
METHODS: Annual estimates of smoking prevalence by government office region (GOR) from THIN were compared with estimates of smoking prevalence from the General Lifestyle Survey (GLF) from 2000 to 2008. RESULTS: For all regions, THIN prevalence data were generally found to be highly comparable with GLF data from 2006 onwards. CONCLUSIONS: THIN primary care data could be used to monitor regional smoking prevalence and highlight regional differences in smoking in the UK


BACKGROUND: Several studies have found a non-linear relationship between mental ill-health and BMI with higher rates in both the underweight and the obese. This study evaluated the shape of the relationship between BMI and distress, suicidal ideation and self-reported mental ill-health conditions in a large population sample. METHODS: Data were drawn from the South Australian Monitoring and Surveillance System (SAMSS) for the years 2002 to 2009 (n = 46,704). SAMSS monitors population trends in state and national risk factors and chronic diseases. Samples are drawn from all households with a functioning number in the Australian White Pages. Computer assisted telephone interviews collected information on self-reported height and weight, demographic and health behaviours. Respondents completed the Kessler Distress and suicidal ideation scales and reported specific mental ill-health conditions. BMI was categorized into deciles to allow for assessment of the shape of any associations with other variables. Logistic regression was used to examine associations between each mental ill-health condition and BMI-decile controlling for age in the base model. This was followed by a full model that added SES and the health-adverse coping behaviours of smoking, alcohol and physical activity to test for changes from the base model. RESULTS: Non-linear associations were observed between BMI-decile and mental ill-health but statistically significantly greater odds of mental ill-health were observed only in the obese and not in the underweight after controlling for age, health-adverse behaviours and socioeconomic status. The association between BMI and mental ill-health might best be described as ‘threshold’. Elevated odds were apparent for middle-aged persons, whereas younger and older individuals had a significantly lower odds of having a mental ill-health condition. CONCLUSIONS: In conclusion, this study has provided no support for the hypothesis of increased mental ill-health problems in the underweight but it has demonstrated the non-linear relationships between BMI and mental ill-health and between BMI and health-adverse behaviours. Non-linear relationships with BMI need to be recognized and addressed during analysis


BACKGROUND: Sexual habits and risky sexual behaviour strongly affect public health. Available data indicate that sexually transmitted infections are increasing in many EU countries. Changes in the epidemiology of sexually transmitted diseases across Europe are among other factors suggested to be driven by changes in sexual behaviour patterns. The purpose of our study is to assess the occurrence of risky behaviour in men aged 18-45 years from the general population. Furthermore, we aim to examine factors associated with risky sexual behaviour. METHODS: A random sample of 33,000 Danish men (18-45 years) was selected from the general population. The participants (participation-rate: 71.0%) received a self-administered questionnaire which could be returned in a paper-based version or as a web-based questionnaire. Non-respondents were subsequently asked to participate in a telephone interview with the same questions as in the paper- or web-based questionnaire. We defined risky sexual behaviour as > 8 lifetime sexual partners, >/=2 new sexual partners in the past 6 months and intercourse with a commercial sex worker. RESULTS: The Danish men reported having had sexual intercourse with a median of 8 female partners during their lifetime and 9.8% of the men have had >/=2 new sexual partners in the past 6 months. Sexual intercourse with a commercial sex worker was reported by 11.3% of the men. Furthermore, men reporting > 8 lifetime partners or >/=2 recent sex partners were more likely to have other risk taking behaviours such as early sexual debut, current smoking and regular
binge drinking. A similar pattern was seen in men who had sex with a commercial sex worker. CONCLUSIONS: Our results show that a high proportion of Danish men have had sexual contact with a large number of partners, and risky sexual behaviour is closely related to other risk-taking behaviours such as smoking and binge drinking.


BACKGROUND: Considerable public health efforts are ongoing Canada-wide to reduce the prevalence of smoking in the general population. From 1985 to 2005, smoking rates among adults decreased from 35% to 19%, however, since that time, the prevalence has plateaued at around 18-19%. To continue to reduce the number of smokers at the population level, one option has been to translate interventions that have demonstrated clinical efficacy into population level initiatives. Nicotine Replacement Therapy (NRT) has a considerable clinical research base demonstrating its efficacy and safety and thus public health initiatives in Canada and other countries are distributing NRT widely through the mail. However, one important question remains unanswered—do smoking cessation programs that involve mailed distribution of free NRT work? To answer this question, a randomized controlled trial is required. METHODS/DESIGN: A single blinded, panel survey design with random assignment to an experimental and a control condition will be used in this study. A two-stage recruitment process will be employed, in the context of a general population survey with two follow-ups (8 weeks and 6 months). Random digit dialing of Canadian home telephone numbers will identify households with adult smokers (aged 18+ years) who are willing to take part in a smoking study that involves three interviews, with saliva collection for 3-HG/cotinine ratio measurement at baseline and saliva cotinine verification at 8-week and 6-month follow-ups (N = 3,000). Eligible subjects interested in free NRT will be determined at baseline (N = 1,000) and subsequently randomized into experimental and control conditions to receive versus not receive nicotine patches. The primary hypothesis is that subjects who receive nicotine patches will display significantly higher quit rates (as assessed by 30 day point prevalence of abstinence from tobacco) at 6-month follow-up as compared to subjects who do not receive nicotine patches at baseline. DISCUSSION: The findings from the proposed trial are timely and highly relevant as mailed distribution of NRT require considerable resources and there are limited public health dollars available to combat this substantial health concern. In addition, findings from this randomized controlled trial will inform the development of models to engage smokers to quit, incorporating proactive recruitment and the offer of evidence based treatment. TRIAL REGISTRATION: ClinicalTrials.gov: NCT01429129


BACKGROUND: Despite schools theoretically being an ideal setting for accessing adolescents and preventing initiation of substance use, there is limited evidence of effective interventions in this setting. Resilience theory provides one approach to achieving such an outcome through improving adolescent mental well-being and resilience. A study was undertaken to examine the potential effectiveness of such an intervention approach in improving adolescent resilience and protective factor scores; and reducing the prevalence of adolescent tobacco, alcohol and marijuana use in three high schools. METHODS: A non-controlled before and after study was undertaken. Data regarding student resilience and protective factors, and measures of tobacco, alcohol and marijuana use were collected from grade 7 to 10 students at baseline (n = 1449) and one year following a three year intervention (n = 1205). RESULTS: Significantly higher resilience and protective factors scores, and significantly lower prevalence of substance use were evident at follow up. CONCLUSIONS: The results suggest that the intervention has the potential to increase resilience and protective factors, and to decrease the use of tobacco, alcohol and marijuana by adolescents. Further more rigorous research is required to confirm this potential.

We examine the role of perceived stress and health behaviors (i.e., cigarette smoking, alcohol consumption, physical inactivity, sleep duration) in shaping differential mortality among whites, blacks, and Hispanics. We use data from the 1990 National Health Interview Survey (N = 38,891), a nationally representative sample of United States adults, to model prospective mortality through 2006. Our first aim examines whether unhealthy behaviors and perceived stress mediate race/ethnic disparities in mortality. The black disadvantage in mortality, relative to whites, closes after adjusting for socioeconomic status (SES), but re-emerges after adjusting for the lower smoking levels among blacks. After adjusting for SES, Hispanics have slightly lower mortality than whites; that advantage increases after adjusting for the greater physical inactivity among Hispanics, but closes after adjusting for their lower smoking levels. Perceived stress, sleep duration, and alcohol consumption do not mediate race/ethnic disparities in mortality. Our second aim tests competing hypotheses about race/ethnic differences in the relationships among unhealthy behaviors, perceived stress, and mortality. The social vulnerability hypothesis predicts that unhealthy behaviors and high stress levels will be more harmful for race/ethnic minorities. In contrast, the Blaxter (1990) hypothesis predicts that unhealthy lifestyles will be less harmful for disadvantaged groups. Consistent with the social vulnerability perspective, smoking is more harmful for blacks than for whites. But consistent with the Blaxter hypothesis, compared to whites, current smoking has a weaker relationship with mortality for Hispanics, and low or high levels of alcohol consumption, high levels of physical inactivity, and short or long sleep hours have weaker relationships with mortality for blacks.
contradiction in clinical practice guidelines from different sources and increased laboratory/clinical capacity were felt critical to the proper management of infectious disease emergencies


**BACKGROUND:** In contrast to seasonal influenza epidemics, where the majority of deaths occur amongst elderly, a considerable part of the 2009 pandemic influenza related deaths concerned relatively young people. In the Netherlands, all deaths associated with laboratory-confirmed influenza A(H1N1) 2009 virus infection had to be notified, both during the 2009-2010 pandemic season and the 2010-2011 influenza season. To assess whether and to what extent pandemic mortality patterns were reverting back to seasonal patterns, a retrospective analyses of all notified fatal cases associated with laboratory-confirmed influenza A(H1N1) 2009 virus infection was performed. **METHODS:** The notification database, including detailed information about the clinical characteristics of all notified deaths, was used to perform a comprehensive analysis of all deceased patients with a laboratory-confirmed influenza A(H1N1) 2009 virus infection. Characteristics of the fatalities with respect to age and underlying medical conditions were analysed, comparing the 2009-2010 pandemic and the 2010-2011 influenza season. **RESULTS:** A total of 65 fatalities with a laboratory-confirmed influenza A(H1N1) 2009 virus infection were
notified in 2009-2010 and 38 in 2010-2011. During the pandemic season, the population mortality rates peaked in persons aged 0-15 and 55-64 years. In the 2010-2011 influenza season, peaks in mortality were seen in persons aged 0-15 and 75-84 years. During the 2010-2011 influenza season, the height of first peak was lower compared to that during the pandemic season. Underlying immunological disorders were more common in the pandemic season compared to the 2010-2011 season (p = 0.02), and cardiovascular disorders were more common in the 2010-2011 season (p = 0.005). CONCLUSIONS: The mortality pattern in the 2010-2011 influenza season still resembled the 2009-2010 pandemic season with a peak in relatively young age groups, but concurrently a clear shift toward seasonal patterns was seen, with a peak in mortality in the elderly, i.e. >/= 75 years of age

Maladies d’Alzheimer


BACKGROUND: Prevalence of Alzheimer's disease in people with Down's syndrome is very high, and many such individuals who are older than 40 years have pathological changes characteristic of Alzheimer’s disease. Evidence to support treatment with Alzheimer's drugs is inadequate, although memantine is beneficial in transgenic mice. We aimed to assess safety and efficacy of memantine on cognition and function in individuals with Down’s syndrome. METHODS: In our prospective randomised double-blind trial, we enrolled adults (>40 years) with karyotypic or clinically diagnosed Down's syndrome, with and without dementia, at four learning disability centres in the UK and Norway. We randomly allocated participants (1:1) to receive memantine or placebo for 52 weeks by use of a computer-generated sequence and a minimisation algorithm to ensure balanced allocation for five prognostic factors (sex, dementia, age group, total Down's syndrome attention, memory, and executive function scales [DAMES] score, and centre). The primary outcome was change in cognition and function, measured with DAMES scores and the adaptive behaviour scale (ABS) parts I and II. We analysed differences in DAMES and ABS scores between groups with analyses of covariance or quantile regression in all patients who completed the 52 week assessment and had available follow-up data. This study is registered, number ISRCTN47562898. FINDINGS: We randomly allocated 88 patients to receive memantine (72 [82%] had DAMES data and 75 [85%] had ABS data at 52 weeks) and 85 to receive placebo (74 [87%] and 73 [86%]). Both groups declined in cognition and function but rates did not differ between groups for any outcomes. After adjustment for baseline score, there were non-significant differences between groups of -4.1 (95% CI -13.1 to 4.8) in DAMES scores, -8.5 (-20.1 to 3.1) in ABS I scores, and 2.0 (-7.2 to 11.3) in ABS II scores, all in favour of controls. 10 (11%) of 88 participants in the memantine group and six (7%) of 85 controls had serious adverse events (p=0.33). Five participants in the memantine group and four controls died from serious adverse events (p=0.77). INTERPRETATION: There is a striking absence of evidence about pharmacological treatment of cognitive impairment and dementia in people older than 40 years with Down's syndrome. Despite promising indications, memantine is not an effective treatment.
Therapies that are effective for Alzheimer's disease are not necessarily effective in this group of patients. FUNDING: Lundbeck


Arising from C. J. Phiel, C. A. Wilson, V. M.-Y. Lee & P. S. Klein 423, 435-439 (2003)A major unresolved issue in Alzheimer's disease is identifying the mechanisms that regulate proteolytic processing of amyloid precursor protein (APP)-glycogen synthase kinase-3 (GSK-3) isoymes are thought to be important in this regulation. Phiel et al. proposed that GSK-3alpha, but not GSK-3beta, controls production of amyloid. We analysed the proteolytic processing of mouse and human APP in mouse brain in vivo in five different genetic and viral models. Our data do not yield evidence for either GSK-3alpha-mediated or GSK-3beta-mediated control of APP processing in brain in vivo


Exchange dynamics between molecules free in solution and bound to the surface of a large supramolecular structure, a polymer, a membrane or solid support are important in many phenomena in biology and materials science. Here we present a novel and generally applicable solution NMR technique, known as dark-state exchange saturation transfer (DEST), to probe such exchange phenomena with atomic resolution. This is illustrated by the exchange reaction between amyloid-beta (Abeta) monomers and polydisperse, NMR-invisible ('dark') protofibrils, a process of significant interest because the accumulation of toxic, aggregated forms of Abeta, from small oligomers to very large assemblies, has been implicated in the aetiology of Alzheimer's disease. The (15)N-DEST experiment imprints with single-residue-resolution dynamic information on the protofibril-bound species in the form of (15)N transverse relaxation rates ((15)N-R(2)) and exchange kinetics between monomers and protofibrils onto the easily observed two-dimensional (1)H-(15)N correlation spectrum of the monomer. The exchanging species on the protofibril surface comprise an ensemble of sparsely populated states where each residue is either tethered to (through other residues) or in direct contact with the surface. The first eight residues exist predominantly in a mobile tethered state, whereas the largely hydrophobic central region and part of the carboxy (C)-terminal hydrophobic region are in direct contact with the protofibril surface for a significant proportion of the time. The C-terminal residues of both Abeta40 and Abeta42 display lower affinity for the protofibril surface, indicating that they are likely to be surface exposed rather than buried as in structures of Abeta fibrils, and might therefore comprise the critical nucleus for fibril formation. The values, however, are significantly larger for the C-terminal residues of Abeta42 than Abeta40, which might explain the former's higher propensity for rapid aggregation and fibril formation.


**BACKGROUND:** Neonatal interventions are largely focused on reduction of mortality and progression towards Millennium Development Goal 4 (child survival). However, little is known about the global burden of long-term consequences of intrauterine and neonatal insults. We did a systematic review to estimate risks of long-term neurocognitive and other sequelae after intrauterine and neonatal insults, especially in low-income and middle-income countries.

**METHODS:** We searched Medline, Cumulative Index to Nursing and Allied Health Literature, the Cochrane Library, and Embase for studies published between Jan 1, 1966, and June 30, 2011, that reported neurodevelopmental sequelae after preterm or neonatal insult. We reviewed publications that had data for long-term outcome after defined neonatal insults. We summarised the results with medians and IQRs, and calculated the risk of at least one sequela after insult.

**FINDINGS:** Of 28,212 studies identified by our search, 153 studies were suitable for inclusion, documenting 22,161 survivors of intrauterine or neonatal insults. The overall median risk of at least one sequela in any domain was 39.4% (IQR 20.0-54.8), with a risk of at least one severe impairment in any insult domain of 18.5% (7.7-33.3), of at least one moderate impairment of 5.0% (0.0-13.3%), and of at least one mild impairment of 10.0% (1.4-17.9%). The pooled risk estimate of at least one sequela (weighted mean) associated with one or more of the insults studied (excluding HIV) was 37.0% (95% CI 27.0-48.0%) and this risk was not significantly affected by region, duration of the follow-up, study design, or period of data collection. The most common sequelae were learning difficulties, cognition, or developmental delay (n=4032; 59%); cerebral palsy (n=1472; 21%); hearing impairment (n=1340; 20%); and visual impairment (n=1228; 18%). Only 40 (26%) studies included data for multidomain impairments. These studies included 2815 individuals, of whom 1048 (37%) had impairments, with 334 (32%) having multiple impairments. **INTERPRETATION:** Intrauterine and neonatal insults have a high risk of causing substantial long-term neurological morbidity. Comparable cohort studies in resource-poor regions should be done to properly assess the burden of these conditions, and long-term outcomes, such as chronic disease, and to inform policy and programme investments. **FUNDING:** The Bill & Melinda Gates Foundation, Saving Newborn Lives, and the Wellcome Trust


**BACKGROUND:** In patients with suspected coronary heart disease, single-photon emission computed tomography (SPECT) is the most widely used test for the assessment of myocardial ischaemia, but its diagnostic accuracy is reported to be variable and it exposes patients to ionising radiation. The aim of this study was to establish the diagnostic accuracy of a multiparametric cardiovascular magnetic resonance (CMR) protocol with x-ray coronary angiography as the reference standard, and to compare CMR with SPECT, in patients with suspected coronary heart disease. **METHODS:** In this prospective trial patients with suspected angina pectoris and at least one cardiovascular risk factor were scheduled for CMR, SPECT, and invasive x-ray coronary
angiography. CMR consisted of rest and adenosine stress perfusion, cine imaging, late gadolinium enhancement, and MR coronary angiography. Gated adenosine stress and rest SPECT used (99m)Tc tetrofosmin. The primary outcome was diagnostic accuracy of CMR. This trial is registered at controlled-trials.com, number ISRCTN77246133. FINDINGS: In the 752 recruited patients, 39% had significant CHD as identified by x-ray angiography. For multiparametric CMR the sensitivity was 86.5% (95% CI 81.8-90.1), specificity 83.4% (79.5-86.7), positive predictive value 77.2%, (72.1-81.6) and negative predictive value 90.5% (87.1-93.0). The sensitivity of SPECT was 66.5% (95% CI 60.4-72.1), specificity 82.6% (78.5-86.1), positive predictive value 71.4% (65.3-76.9), and negative predictive value 79.1% (74.8-82.8). The sensitivity and negative predictive value of CMR and SPECT differed significantly (p<0.0001 for both) but specificity and positive predictive value did not (p=0.916 and p=0.061, respectively).

INTERPRETATION: CE-MARC is the largest, prospective, real world evaluation of CMR and has established CMR's high diagnostic accuracy in coronary heart disease and CMR's superiority over SPECT. It should be adopted more widely than at present for the investigation of coronary heart disease. FUNDING: British Heart Foundation


BACKGROUND: The interest in neonatal screening for lysosomal storage disorders has increased substantially because of newly developed enzyme replacement therapies, the need for early diagnosis, and technical advances. We tested for Gaucher's disease, Pompe's disease, Fabry's disease, and Niemann-Pick disease types A and B in an anonymous prospective nationwide screening study that included genetic mutation analysis to assess the practicality and appropriateness of including these disorders in neonatal screening panels. METHODS: Specimens from dried blood spots of 34,736 newborn babies were collected consecutively from January, 2010 to July, 2010, as part of the national routine Austrian newborn screening programme. Anonymised samples were analysed for enzyme activities of acid beta-glucocerebrosidase, alpha-galactosidase, alpha-glucosidase, and acid sphingomyelinase by electrospray ionisation tandem mass spectrometry. Genetic mutation analyses were done in samples with suspected enzyme deficiency. FINDINGS: All 34,736 samples were analysed successfully by the multiplex screening assay. Low enzyme activities were detected in 38 babies. Mutation analysis confirmed lysosomal storage disorders in 15 of them. The most frequent mutations were found for Fabry's disease (1 per 3859 births), followed by Pompe's disease (1 per 8684), and Gaucher's disease (1 per 17,368). The positive predictive values were 32% (95% CI 16-52), 80% (28-99), and 50% (7-93), respectively. Mutational analysis detected predominantly missense mutations associated with a late-onset phenotype. INTERPRETATION: The combined overall proportion of infants carrying a mutation for lysosomal storage disorders was higher than expected. Neonatal screening for lysosomal storage disorders is likely to raise challenges for primary health-care providers. Furthermore, the high frequency of late-onset mutations makes lysosomal storage disorders a broad health problem beyond childhood. FUNDING: Austrian Ministry of Health, Family, and Women


BACKGROUND: Dalcetrapib modulates cholesteryl ester transfer protein (CETP) activity to raise high-density lipoprotein cholesterol (HDL-C). After the failure of torcetrapib it was unknown if HDL produced by interaction with CETP had pro-atherogenic or pro-inflammatory properties. dal-PLAQUE is the first multicentre study using novel non-invasive multimodality imaging to assess structural and inflammatory indices of atherosclerosis as primary endpoints. METHODS: In this phase 2b, double-blind, multicentre trial, patients (aged 18-75 years) with, or with high risk of, coronary heart disease were randomly assigned (1:1) to dalcetrapib 600 mg/day or placebo for 24 months. Randomisation was done with a computer-generated randomisation code and was stratified by centre. Patients and investigators were masked to treatment. Coprimary endpoints were MRI-assessed indices (total vessel area, wall area, wall thickness, and normalised wall index [average carotid]) after 24 months and (18)F-fluorodeoxyglucose ((18)F-FDG) PET/CT assessment of arterial inflammation within an index vessel (right carotid, left carotid, or ascending thoracic aorta) after 6 months, with no-harm boundaries established before unblinding of the trial. Analysis was by intention to treat. This trial is registered at ClinicalTrials.gov, NCT00655473.

FINDINGS: 189 patients were screened and 130 randomly assigned to placebo (66 patients) or dalcetrapib (64 patients). For the coprimary MRI and PET/CT endpoints, CIs were below the no-harm boundary or the adverse change was numerically lower in the dalcetrapib group than in the placebo group. MRI-derived change in total vessel area was reduced in patients given dalcetrapib compared with those given placebo after 24 months; absolute change from baseline relative to placebo was -4.01 mm² (90% CI -7.23 to -0.80; nominal p=0.04). The PET/CT measure of index vessel most-diseased-segment target-to-background ratio (TBR) was not different between groups, but carotid artery analysis showed a 7% reduction in most-diseased-segment TBR in the dalcetrapib group compared with the placebo group (-7.3 [90% CI -13.5 to -0.8]; nominal p=0.07). Dalcetrapib did not increase office blood pressure and the frequency of adverse events was similar between groups. INTERPRETATION: Dalcetrapib showed no evidence of a pathological effect related to the arterial wall over 24 months. Moreover, this trial suggests possible beneficial vascular effects of dalcetrapib, including the reduction in total vessel enlargement over 24 months, but long-term safety and clinical outcomes efficacy of dalcetrapib need to be analysed.

FUNDING: F Hoffmann-La Roche Ltd
Maladies liées à l'alcool


BACKGROUND: Cardiovascular risk factors (CVRF) were collected as part of a randomised controlled trial of a multi-component intervention to reduce smoking among male prisoners. Cross-sectional baseline data on CVRF were compared among smoking male prisoners and males of similar age in the general population. METHODS: 425 smoking prisoners were recruited (n = 407 in New South Wales; 18 in Queensland), including 15% of Aboriginal descent (mean age 33 years; median sentence length 3.6 years). We measured CVRF such as smoking, physical activity, blood pressure, risky alcohol use, symptoms of depression, and low socioeconomic status. RESULTS: We found that 39% of prisoners had 3+ CVRF, compared to 10% in a general community sample of most disadvantaged men of a similar age. Significantly more Aboriginal prisoners had 3+ CVRF than non-Aboriginal prisoners (55% vs 36%, p < 0.01) and were twice as likely to have 4+ CVRF (27% vs 12%). In addition to all prisoners in this study being a current smoker (with 70% smoking 20+ cigarettes per day), the prevalence of other CVRF was very high: insufficient physical activity (23%); hypertension (4%), risky drinking (52%), symptoms of depression (14%) and low socioeconomic status (SES) (44%). Aboriginal prisoners had higher levels of risky alcohol use, symptoms of depression, and were more likely to be of low SES. CONCLUSION: Prisoners are at high risk for developing cardiovascular disease compared to even the most disadvantaged in their community and should be the focus of specific public health interventions. TRIAL REGISTRATION: This trial is registered with the Australian New Zealand Clinical Trials Registry ACTRN#12606000229572

BACKGROUND: Family psychosocial characteristics in childhood have been associated with children's development into criminal behaviour and mortality. This study explored these possible relationships and examined alcohol and/or drug use and mental problems as possible mediating factors, highlighting gender-specific patterns. METHODS: Data from Swedish subjects born in 1953 (n = 14,294) from the Stockholm Birth Cohort study were examined. Several indicators of adverse family factors and individual problems were included in the present study. The information was derived from various data sources, covering different periods. Gender-specific associations with incidence of criminality (1966-1980) and mortality (1981-2009) were analysed using logistic regression. Furthermore, the population attributable fraction (PAF) was calculated for all variables in the fully adjusted models which were positively related to the outcome.

RESULTS: Overall incidence of criminality and mortality was (m/f 32.3/6.6) and (m/f 6.1/3.5), respectively. The results showed that all aspects of family psychosocial and individual problems studied were associated with criminality for both genders. Among males, individual problems seemed to partly mediate these relations, but the associations remained statistically significant. Interestingly, the PAF analysis revealed a reduction in criminality of 17.5% when individual problems with alcohol and/or drug use were considered. Among females, a significant impact of alcohol and/or drug use on the association between family psychosocial characteristics and subsequent criminality was obtained. Inclusion of father's occupational class only somewhat reduced the estimates for the genders. Concerning male mortality, father's alcohol abuse was significantly related to an increased risk. When individual criminality was accounted for, the association was substantially reduced but remained statistically significant. Among females, when adjusting for family psychosocial factors, only the association between parents' mental problems and females' mortality was significant. None of the individual problem variables managed to explain this association. CONCLUSIONS: Family psychosocial characteristics were associated with both subsequent criminal behaviour and mortality. These connections were partly explained by individual risk factors, especially by alcohol and/or drug use. The practical implications of the findings point to the importance of addressing the individual's alcohol and/or drug use in reducing criminal behaviour, which would also lower the mortality rates.

Paludisme


BACKGROUND: During the past decade, renewed global and national efforts to combat malaria have led to ambitious goals. We aimed to provide an accurate assessment of the levels and time trends in malaria mortality to aid assessment of progress towards these goals and the focusing of future efforts. METHODS: We systematically collected all available data for malaria mortality for the period 1980-2010, correcting for misclassification bias. We developed a range of predictive models, including ensemble models, to estimate malaria mortality with uncertainty by age, sex, country, and year. We used key predictors of malaria mortality such as Plasmodium falciparum parasite prevalence, first-line antimalarial drug resistance, and vector control. We used out-of-sample predictive validity to select the final model. FINDINGS: Global malaria deaths increased from 995,000 (95% uncertainty interval 711,000-1,412,000) in 1980 to a peak of 1,817,000 (1,430,000-2,366,000) in 2004, decreasing to 1,238,000 (929,000-1,685,000) in 2010. In Africa, malaria deaths increased from 493,000 (290,000-747,000) in 1980 to 1,613,000 (1,243,000-2,145,000) in 2004, decreasing by about 30% to 1,133,000 (848,000-1,591,000) in 2010. Outside of Africa, malaria deaths have steadily decreased from 502,000 (322,000-833,000) in 1980 to 104,000 (45,000-191,000) in 2010. We estimated more deaths in individuals aged 5 years or older than has been estimated in previous studies: 435,000 (307,000-658,000) deaths in Africa and 89,000 (33,000-177,000) deaths outside of Africa in 2010. INTERPRETATION: Our findings show that the malaria mortality burden is larger than previously estimated, especially in adults. There
has been a rapid decrease in malaria mortality in Africa because of the scaling up of control activities supported by international donors. Donor support, however, needs to be increased if malaria elimination and eradication and broader health and development goals are to be met. FUNDING: The Bill & Melinda Gates Foundation

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http://www.ncbi.nlm.nih.gov/pubmed/22100853


Pathologies liées à l'obésité

(1) **MITKA M. Heart disease and stroke deaths fall, but some fear a reverse in the trend.** JAMA. 2012 Feb. 8, vol. 307, n° 6, pp.550, 552

(2) **MITKA M. Programs to reduce childhood obesity seem to work, say Cochrane reviewers.** JAMA. 2012 Feb. 1, vol. 307, n° 5, pp.444-445


2006, 2007-2008, and 2009-2010) over 12 years. RESULTS: In 2009-2010, 9.7% (95% CI, 7.6%-12.3%) of infants and toddlers had a high weight-for-recumbent length and 16.9% (95% CI, 15.4%-18.4%) of children and adolescents from 2 through 19 years of age were obese. There was no difference in obesity prevalence among males (P = .62) or females (P = .65) between 2007-2008 and 2009-2010. However, trend analyses over a 12-year period indicated a significant increase in obesity prevalence between 1999-2000 and 2009-2010 in males aged 2 through 19 years (odds ratio, 1.05; 95% CI, 1.01-1.10) but not in females (odds ratio, 1.02; 95% CI, 0.98-1.07) per 2-year survey cycle. There was a significant increase in BMI among adolescent males aged 12 through 19 years (P = .04) but not among any other age group or among females.

CONCLUSION: In 2009-2010, the prevalence of obesity in children and adolescents was 16.9%; this was not changed compared with 2007-2008


CONTEXT: Between 1980 and 1999, the prevalence of adult obesity (body mass index [BMI] >=30) increased in the United States and the distribution of BMI changed. More recent data suggested a slowing or leveling off of these trends. OBJECTIVE: To estimate the prevalence of adult obesity from the 2009-2010 National Health and Nutrition Examination Survey (NHANES) and compare adult obesity and the distribution of BMI with data from 1999-2008. DESIGN, SETTING, AND PARTICIPANTS: NHANES includes measured heights and weights for 5926 adult men and women from a nationally representative sample of the civilian noninstitutionalized US population in 2009-2010 and for 22,847 men and women in 1999-2008. MAIN OUTCOME MEASURES: The prevalence of obesity and mean BMI. RESULTS: In 2009-2010 the age-adjusted mean BMI was 28.7 (95% CI, 28.3-29.1) for men and also 28.7 (95% CI, 28.4-29.0) for women. Median BMI was 27.8 (interquartile range [IQR], 24.7-31.7) for men and 27.3 (IQR, 23.3-32.7) for women. The age-adjusted prevalence of obesity was 35.5% (95% CI, 31.9%-39.2%) among adult men and 35.8% (95% CI, 34.0%-37.7%) among adult women. Over the 12-year period from 1999 through 2010, obesity showed no significant increase among women overall (age- and race-adjusted annual change in odds ratio [AOR], 1.01; 95% CI, 1.00-1.03; P = .07), but increases were statistically significant for non-Hispanic black women (P = .04) and Mexican American women (P = .046). For men, there was a significant linear trend (AOR, 1.04; 95% CI, 1.02-1.06; P < .001) over the 12-year period. For both men and women, the most recent 2 years (2009-2010) did not differ significantly (P = .08 for men and P = .24 for women) from the previous 6 years (2003-2008). Trends in BMI were similar to obesity trends. CONCLUSION: In 2009-2010, the prevalence of obesity was 35.5% among adult men and 35.8% among adult women, with no significant change compared with 2003-2008


With prevalence approaching 20% in the United States, adolescent obesity has become a common problem for patients, parents, and clinicians. Obese adolescents may experience physical and psychosocial complications, as illustrated by the case of Ms K, a 14-year-old girl with a body mass index of 40. Unfortunately, the effectiveness of pediatric obesity treatment is modest in younger children and declines in older children and adolescents, and few interventions involving adolescents have produced significant long-term weight loss. Nevertheless, novel strategies to alter energy balance have shown preliminary evidence of benefit in clinical trials, including a diet focused on food quality rather than fat restriction and a lifestyle approach to encourage enjoyable physical activity throughout the day rather than intermittent exercise. Parents can have an important influence on weight-related behaviors in adolescents despite typically complicated emotional dynamics at this age, especially through the use of noncoercive methods. A key parenting practice applicable to children of all ages is to create a protective environment in the home, substituting nutritious foods for unhealthful ones and facilitating physical activities instead of sedentary pursuits. Other behaviors that may promote successful long-term weight
BACKGROUND: There is little information regarding the trends in body mass index (BMI) and obesity in the overall Portuguese population, namely if these trends are similar according to educational level. In this study, we assessed the trends in the prevalence of overweight and obesity in the Portuguese population, overall and by educational level. METHODS: Cross-sectional national health interview surveys conducted in 1995-6 (n = 38,504), 1998-9 (n = 38,688) and 2005-6 (n = 25,348). Data were derived from the population and housing census of 1991 and two geographically-based strata were defined. The sampling unit was the house, and all subjects living in the sampling unit were surveyed. Height and weight were self-reported; the effects of gender, age group and educational level were also assessed by self-reported structured questionnaires. Bivariate comparisons were performed using Chi-square or analysis of variance (ANOVA). Trends in BMI levels were assessed by linear regression analysis, while trends in the prevalence of obesity were assessed by logistic regression. RESULTS: Mean (+/-standard deviation) BMI increased from 25.2 +/- 4.0 in 1995-6 to 25.7 +/- 4.5 kg/m(2) in 2005-6. Prevalence of overweight remained stable (36.1% in 1995-6 and 36.4% in 2005) while prevalence of obesity increased (11.5% in 1995-6 and 15.1% in 2005-6). Similar findings were observed according to age group. Mean age-adjusted BMI increase (expressed in kg/m(2)/year and 95% confidence interval) was 0.073 (0.062, 0.084), 0.016 (0.000, 0.031) and 0.073 (0.049, 0.098) in men with primary, secondary and university levels, respectively; the corresponding values in women were 0.085 (0.073, 0.097), 0.052 (0.035, 0.069) and 0.062 (0.038, 0.084). Relative to 1995-6, obesity rates increased by 48%, 41% and 59% in men and by 40%, 75% and 177% in women with primary, secondary and university levels, respectively. The corresponding values for overweight were 6%, 1% and 23% in men and 5%, 7% and 65% in women. CONCLUSION: Between 1995


METHODS/DESIGN: A clustered (at the level of school) RCT will be used to compare a targeted, 10 week, stepped activity programme (activity diary, dance DVD, circuit-training and motivational interviewing) designed to promote ESE. We will recruit 20 primary schools to participate in the intervention and 9-11 year old children will be screened for low levels of ESE, asthma and overweight. In order to provide sufficient power to detect a difference in primary outcomes (Body Mass Index-BMI & ESE at 12 month follow-up) between children in the intervention schools and control schools, the target sample size is 396. Assessments of BMI, ESE, waist circumference, peak flow, activity levels and emotional and behavioural difficulties will be made at baseline, 4 months and 12 month follow-up. DISCUSSION: We aim to increase ESE and levels of physical activity in children with risk factors for adult obesity. The outcomes of this study will inform policy makers about the feasibility, acceptability and effectiveness of delivering targeted health interventions within a school setting. TRIAL REGISTRATION: ISRCTN Register no. ISRCTN12650001


BACKGROUND: Low levels of physical activity in children have been linked to an increased risk of obesity, but many children lack confidence in relation to exercise (exercise self-efficacy). Factors which can impact on confidence include a chronic health condition such as asthma, poor motor skills and being overweight. Increasing levels of physical activity have obvious benefits for children with asthma and children who are overweight, but few activity interventions with children specifically target children with low exercise self-efficacy (ESE). This study aims to evaluate the efficacy and feasibility of a schools-based activity programme suitable for children with risk factors for adult obesity, including asthma, overweight and low exercise self-efficacy.

REFERENCES:


BACKGROUND: There is little information regarding the trends in body mass index (BMI) and obesity in the overall Portuguese population, namely if these trends are similar according to educational level. In this study, we assessed the trends in the prevalence of overweight and obesity in the Portuguese population, overall and by educational level. METHODS: Cross-sectional national health interview surveys conducted in 1995-6 (n = 38,504), 1998-9 (n = 38,688) and 2005-6 (n = 25,348). Data were derived from the population and housing census of 1991 and two geographically-based strata were defined. The sampling unit was the house, and all subjects living in the sampling unit were surveyed. Height and weight were self-reported; the effects of gender, age group and educational level were also assessed by self-reported structured questionnaires. Bivariate comparisons were performed using Chi-square or analysis of variance (ANOVA). Trends in BMI levels were assessed by linear regression analysis, while trends in the prevalence of obesity were assessed by logistic regression. RESULTS: Mean (+/-standard deviation) BMI increased from 25.2 +/- 4.0 in 1995-6 to 25.7 +/- 4.5 kg/m(2) in 2005-6. Prevalence of overweight remained stable (36.1% in 1995-6 and 36.4% in 2005) while prevalence of obesity increased (11.5% in 1995-6 and 15.1% in 2005-6). Similar findings were observed according to age group. Mean age-adjusted BMI increase (expressed in kg/m(2)/year and 95% confidence interval) was 0.073 (0.062, 0.084), 0.016 (0.000, 0.031) and 0.073 (0.049, 0.098) in men with primary, secondary and university levels, respectively; the corresponding values in women were 0.085 (0.073, 0.097), 0.052 (0.035, 0.069) and 0.062 (0.038, 0.084). Relative to 1995-6, obesity rates increased by 48%, 41% and 59% in men and by 40%, 75% and 177% in women with primary, secondary and university levels, respectively. The corresponding values for overweight were 6%, 1% and 23% in men and 5%, 7% and 65% in women. CONCLUSION: Between 1995
and 2005, obesity increased while overweight remained stable in the adult Portuguese population. Although higher rates were found among lesser educated subjects, the strong increase in BMI and obesity levels in highly educated subjects is of concern

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BACKGROUND: Patterns of physical activity (PA), domestic activity and sedentary behaviours are changing rapidly in Asia. Little is known about their relationship with obesity in this context. This study investigates in detail the relationship between obesity, physical activity, domestic activity and sedentary behaviours in a Thai population. METHODS: 74,981 adult students aged 20-50 from all regions of Thailand attending the Sukhothai Thammathirat Open University in 2005-2006 completed a self-administered questionnaire, including providing appropriate self-reported data on height, weight and PA. We conducted cross-sectional analyses of the relationship between obesity, defined according to Asian criteria (Body Mass Index (BMI) >/=25), and measures of physical activity and sedentary behaviours (exercise-related PA; leisure-related computer use and television watching ("screen-time"); housework and gardening; and sitting-time) adjusted for age, sex, income and education and compared according to a range of personal characteristics. RESULTS: Overall, 15.6% of participants were obese, with a substantially greater prevalence in men (22.4%) than women (9.9%). Inverse associations between being obese and total weekly sessions of exercise-related PA were observed in men, with a significantly weaker association seen in women (p(interaction) < 0.001). Increasing obesity with increasing screen-time was seen in all population groups examined; there was an overall 18% (15-21%) increase in obesity with every two hours of additional daily screen-time. There were 33% (26-39%) and 33% (21-43%) reductions in the adjusted risk of being obese in men and women, respectively, reporting housework/gardening daily versus seldom or never. Exercise-related PA, screen-time and housework/gardening each had independent associations with obesity. CONCLUSIONS: Domestic activities and sedentary behaviours are important in relation to obesity in Thailand, independent of exercise-related physical activity. In this setting, programs to prevent and treat obesity through increasing general physical activity need to consider overall energy expenditure and address a wide range of low-intensity high-volume activities in order to be effective


BACKGROUND: The aim of this work was to examine the prevalence of different metabolic phenotypes of obesity, and to analyze, by using different risk scores, how the metabolic syndrome (MetS) definition discriminates between unhealthy and healthy metabolic phenotypes in different obesity classes. METHODS: The Finnish type 2 diabetes (FIN-D2D) survey, a part of the larger implementation study, was carried out in 2007. The present cross-sectional analysis comprises 2,849 individuals aged 45-74 years. The MetS was defined with the new Harmonization definition. Cardiovascular risk was estimated with the Framingham and SCORE risk scores. Diabetes risk was assessed with the FINDRISK score. Non-alcoholic fatty liver disease (NAFLD) was estimated with the NAFLD score. Participants with and without MetS were classified in different weight categories and analysis of regression models were used to test the linear trend between body mass index (BMI) and various characteristics in individuals with and without MetS; and interaction between BMI and MetS. RESULTS: A metabolically healthy but obese phenotype was observed in 9.2% of obese men and in 16.4% of obese women. The MetS-BMI interaction was significant for fasting glucose, 2-hour plasma glucose, fasting plasma insulin and insulin resistance (HOMA-IR)(p < 0.001 for all). The prevalence of total diabetes (detected prior to or during survey) was 37.0% in obese individuals with MetS and 4.3% in obese individuals without MetS (p < 0.001).
MetS-BMI interaction was significant (p < 0.001) also for the Framingham 10 year CVD risk score, NAFLD score and estimated liver fat %, indicating greater effect of increasing BMI in participants with MetS compared to participants without MetS. The metabolically healthy but obese individuals
had lower 2-hour postload glucose levels (p = 0.0030), lower NAFLD scores (p < 0.001) and lower CVD risk scores (Framingham, p < 0.001; SCORE, p = 0.002) than normal weight individuals with MetS. CONCLUSIONS: Undetected Type 2 diabetes was more prevalent among those with MetS irrespective of the BMI class and increasing BMI had a significantly greater effect on estimates of liver fat and future CVD risk among those with MetS compared with participants without MetS. A healthy obese phenotype was associated with a better metabolic profile than observed in normal weight individuals with MetS


Obesity stigma exists within many institutions and cultural settings. Most studies suggest that stigmatising experiences have a negative impact on individuals' health and social behaviours and outcomes. However, some studies indicate that obesity stigma can motivate individuals to lose weight. Limited research has examined weight-based stigma from the perspective of obese individuals, including their perceptions of, and responses to, the different types of weight-based stigma they face in their daily lives. This study advances knowledge about weight-based stigma by documenting how obese adults (mostly female) described the different types of obesity stigma that they faced, how they responded to this stigma, and how different types of stigma impact on health and social wellbeing. Semi-structured, qualitative interviews were conducted between April 2008 and March 2009 with a diverse sample of 141 obese Australian adults. Guided by Link and Phelan's (2006) categorisation of different types of discrimination, participants' experiences could be grouped into three distinct types of stigma: 1) Direct (e.g. being abused when using public transport); 2) Environmental (e.g. not being able to fit into seats on planes); and 3) Indirect (e.g. people staring at the contents of their supermarket trolley). Participants described that more subtle forms of stigma had the most impact on their health and social wellbeing. However, it was the interaction between direct, environmental and indirect stigma that created a barrier to participation in health-promoting activities. Participants rarely challenged stigma and often blamed themselves for stigmatising experiences. They also avoided situations where they perceived they would be stigmatised and constantly thought about how they could find a solution to their obesity


BACKGROUND: Vitamin D status, as indicated by 25-hydroxyvitamin D is inversely associated with adiposity, glucose homeostasis, lipid profiles, and blood pressure along with its classic role in calcium homeostasis and bone metabolism. It is also shown to be inversely associated with metabolic syndrome and cardiovascular diseases in western populations. However, evidence from the Asian population is limited. Therefore, we aim to study the prevalence of vitamin D insufficiency (< 50 nmol/L) and the association of 25-hydroxyvitamin D with metabolic risk factors among an existing Malay cohort in Kuala Lumpur. METHODS: This is an analytical cross sectional study. A total of 380 subjects were sampled and their vitamins D status (25-hydroxyvitamin D), fasting blood glucose, full lipid profile were assessed using venous blood. Systolic and diastolic blood pressure, weight, height and waist circumference were measured following standard protocols. Socio-demographic data such as sex, age, smoking status etc were also collected. Data was analysed using t-test, chi-square test, General Linear Model and multiple logistic regression. RESULTS: Females made up 58% of the sample. The mean age of respondents was 48.5 (SD 5.2) years. Females had significantly lower mean Vitamin D levels (36.2; 95% CI: 34.5, 38.0 nmol/L) compared to males (56.2; 95% CI: 53.2, 59.2 nmol/L). Approximately 41% and 87% of males and females respectively had insufficient (< 50 nmol/L) levels of 25-hydroxyvitamin D (p < 0.001). The prevalence of Metabolic Syndrome for the whole sample was 38.4 (95% CI: 33.5, 43.3)%. In the multivariate model (adjusted for age, sex, abdominal obesity, HDL-cholesterol, diastolic blood pressure), insufficient Vitamin D status was significantly associated with 1-year age increments (OR: 0.93; 95% CI: 0.88, 0.98), being female (OR: 8.68; 95% CI: 5.08, 14.83) and
abdominal obesity (OR: 2.57; 95% CI: 1.51, 4.39). Respondents with insufficient vitamin D were found to have higher odds of having Metabolic Syndrome (OR: 1.73; 95% CI: 1.02, 2.92) after adjusting for age and sex. CONCLUSIONS: Our results highlight the high prevalence of vitamin D insufficiency among Malay adults in Kuala Lumpur. Vitamin D insufficiency is independently associated with younger age, female sex and greater abdominal obesity. Vitamin D insufficiency is also associated with Metabolic Syndrome


Scholars call for greater attention to social contexts that promote and deter risk factors for health. Parenthood transforms social contexts in a myriad of ways that may influence long-term patterns of weight gain. Life course features of parenthood such as age at first birth, parity, and living with a minor child may further influence weight gain. Moreover, the social and biological features of parenthood vary in systematic ways for women and men, raising questions about how social contexts might differentially affect weight patterns by gender. We consider how parenthood influences trajectories of change in body weight over a fifteen year period (from 1986 to 2001) with growth curve analysis of data from the Americans’ Changing Lives Survey, conducted with adults aged 24 and older in the contiguous United States (N = 3617). Findings suggest that parents gain weight more rapidly than the childless throughout the study period and that this weight gain occurs for both men and women. Men and women who have their first child earlier or later than about age 27 have accelerated weight gain, living with a minor child is associated with heavier weight for men than women, and parity is associated with greater weight gain for women than men. We conclude that parenthood contributes to a long term, cumulative process of weight gain for American women and men but life course factors that accelerate this process may differ by gender


Medical sociologists hold that social conditions generate disparities across a host of health conditions through exposure to a variety of more proximate risk factors. Though distal and proximal causes jointly influence disease, the nature of risk accumulation may differ appreciably by the link of a proximal cause to the outcome in question. This paper employs a representative sample of over 3000 American older adults to examine whether position in the educational gradient amplifies the effect of obesity on two health outcomes. Results indicate that educational inequalities amplify the effect of high body mass index on disability (unstandardized coefficients across education groups range from -.05 [ns] to .26 [p < .01] among overweight respondents yet reach .17 [ns] to .73 [p < .001] among severely obese adults), but fail to amplify the consequences of severe obesity in the case of C-reactive protein (CRP) levels. Instead, educational gradients in CRP are most pronounced at lower levels of body mass. Sex-specific analyses further clarify these patterns, as the connections between CRP and body mass are particularly strong among women. We conclude that risk accumulation processes differ based on the proximity of causes to the health outcome under examination


BACKGROUND: In Australia, the food industry and public health groups are locked in serious struggle for regulatory influence over the terms of front-of-pack food labelling. Clear, unambiguous labelling of the nutritional content of pre-packaged foods and of standardized food items sold in chain restaurants is consistent with the prevailing philosophy of ‘personal responsibility’. An interpretive, front-of-pack labelling scheme has the capacity to encourage healthier patterns of eating, and to be a catalyst for improvements in the nutritional quality of food products through reformulation. On the other hand, the strength of opposition of the Australian Food and Grocery
Council to 'Traffic Light Labelling', and its efforts to promote a non-interpretive, voluntary scheme, invite the interpretation that the food industry is resistant to any reforms that could destabilise current (unhealthy) purchasing patterns and the revenues they represent. DISCUSSION: This article argues that although policies that aim to educate consumers about the nutritional content of food are welcome, they are only one part of a broader basket of policies that are needed to make progress on obesity prevention and public health nutrition. However, to the extent that food labelling has the capacity to inform and empower consumers to make healthier choices--and to be a catalyst for improving the nutritional quality of commercial recipes--it has an important role to play. Furthermore, given the dietary impact of meals eaten in fast food and franchise restaurants, interpretive labelling requirements should not be restricted to pre-packaged foods. SUMMARY: Food industry resistance to an interpretive food labelling scheme is an important test for government, and a case study of how self-interest prompts industry to promote weaker, voluntary schemes that pre-empt and undermine progressive public health regulation.

SIDA


BACKGROUND: Nevirapine given once-daily for the first 6, 14, or 28 weeks of life to infants exposed to HIV-1 via breastfeeding reduces transmission through this route compared with single-dose nevirapine at birth or neonatally. We aimed to assess incremental safety and efficacy of extension of such prophylaxis to 6 months. METHODS: In our phase 3, randomised, double-blind, placebo-controlled HPTN 046 trial, we assessed the incremental benefit of extension of once-daily infant nevirapine from age 6 weeks to 6 months. We enrolled breastfeeding infants born to mothers with HIV-1 in four African countries within 7 days of birth. Following receipt of nevirapine from birth to 6 weeks, infants without HIV infection were randomly allocated (by use of a computer-generated permuted block algorithm with random block sizes and stratified by site and maternal antiretroviral treatment status) to receive extended nevirapine prophylaxis or placebo until 6 months or until breastfeeding cessation, whichever came first. The primary efficacy endpoint was HIV-1 infection in infants at 6 months and safety endpoints were adverse reactions in both groups. We used Kaplan-Meier analyses to compare differences in the primary outcome between groups. This study is registered with ClinicalTrials.gov, number NCT00074412.

FINDINGS: Between June 19, 2008, and March 12, 2010, we randomly allocated 1527 infants (762 nevirapine and 765 placebo); five of whom had HIV-1 infection at randomisation and were excluded from the primary analyses. In Kaplan-Meier analysis, 1.1% (95% CI 0.3-1.8) of infants
who received extended nevirapine developed HIV-1 between 6 weeks and 6 months compared with 2.4% (1.3-3.6) of controls (difference 1.3%, 95% CI 0-2.6), equating to a 54% reduction in transmission (p=0.049). However, mortality (1.2% for nevirapine vs 1.1% for placebo; p=0.81) and combined HIV infection and mortality rates (2.3% vs 3.2%; p=0.27) did not differ between groups at 6 months. 125 (16%) of 758 infants given extended nevirapine and 116 (15%) of 761 controls had serious adverse events, but frequency of adverse events, serious adverse events, and deaths did not differ significantly between treatment groups. INTERPRETATION: Nevirapine prophylaxis can safely be used to provide protection from mother-to-child transmission of HIV-1 via breastfeeding for infants up to 6 months of age. FUNDING: US National Institutes of Health


Variable regions 1 and 2 (V1/V2) of human immunodeficiency virus-1 (HIV-1) gp120 envelope glycoprotein are critical for viral evasion of antibody neutralization, and are themselves protected by extraordinary sequence diversity and N-linked glycosylation. Human antibodies such as PG9 nonetheless engage V1/V2 and neutralize 80% of HIV-1 isolates. Here we report the structure of V1/V2 in complex with PG9. V1/V2 forms a four-stranded beta-sheet domain, in which sequence diversity and glycosylation are largely segregated to strand-connecting loops. PG9 recognition involves electrostatic, sequence-independent and glycan interactions: the latter account for over half the interactive surface but are of sufficiently weak affinity to avoid autoreactivity. The structures of V1/V2-directed antibodies CH04 and PGT145 indicate that they share a common mode of glycan penetration by extended anionic loops. In addition to structurally defining V1/V2, the results thus identify a paradigm of antibody recognition for highly glycosylated antigens, which-with PG9-involves a site of vulnerability comprising just two glycans and a strand


SAMHD1, an analogue of the murine interferon (IFN)-gamma-induced gene Mg11 (ref. 1), has recently been identified as a human immunodeficiency virus-1 (HIV-1) restriction factor that blocks early-stage virus replication in dendritic and other myeloid cells and is the target of the lentiviral protein Vpx, which can relieve HIV-1 restriction. SAMHD1 is also associated with Aicardi-Goutieres syndrome (AGS), an inflammatory encephalopathy characterized by chronic cerebrospinal fluid lymphocytosis and elevated levels of the antiviral cytokine IFN-alpha. The pathology associated with AGS resembles congenital viral infection, such as transplacentally acquired HIV. Here we show that human SAMHD1 is a potent dGTP-stimulated triphosphohydrolase that converts deoxynucleoside triphosphates to the constituent deoxynucleoside and inorganic triphosphate. The crystal structure of the catalytic core of SAMHD1 reveals that the protein is dimeric and indicates a molecular basis for dGTP stimulation of catalytic activity against dNTPs. We propose that SAMHD1, which is highly expressed in dendritic cells, restricts HIV-1 replication by hydrolysing the majority of cellular dNTPs, thus inhibiting reverse transcription and viral complementary DNA (cDNA) synthesis

BACKGROUND: There is limited evidence that interventions for depression and other common mental disorders (CMD) can be integrated sustainably into primary health care in Africa. We aimed to pilot a low-cost multi-component 'Friendship Bench Intervention' for CMD, locally adapted from problem-solving therapy and delivered by trained and supervised female lay workers to learn if was feasible and possibly effective as well as how best to implement it on a larger scale. METHOD: We trained lay workers for 8 days in screening and monitoring CMD and in delivering the intervention. Ten lay workers screened consecutive adult attenders who either were referred or self-referred to the Friendship Bench between July and December 2007. Those scoring above the validated cut-point of the Shona Symptom Questionnaire (SSQ) for CMD were potentially eligible. Exclusions were suicide risk or very severe depression. All others were offered 6 sessions of problem-solving therapy (PST) enhanced with a component of activity scheduling. Weekly nurse-led group supervision and monthly supervision from a mental health specialist were provided. Data on SSQ scores at 6 weeks after entering the study were collected by an independent research nurse. Lay workers completed a brief evaluation on their experiences of delivering the intervention. RESULTS: Of 395 potentially eligible, 33 (8%) were excluded due to high risk. Of the 362 left, 2% (7) declined and 10% (35) were lost to follow-up leaving an 88% response rate (n = 320). Over half (n = 166, 52%) had presented with an HIV-related problem. Mean SSQ score fell from 11.3 (sd 1.4) before treatment to 6.5 (sd 2.4) after 3-6 sessions. The drop in SSQ scores was proportional to the number of sessions attended. Nine of the ten lay workers rated themselves as very able to deliver the PST intervention. CONCLUSION: We have found preliminary evidence of a clinically meaningful improvement in CMD associated with locally adapted problem-solving therapy delivered by lay health workers through routine primary health care in an African setting. There is a need to test the effectiveness of this task-shifting mental health intervention in an appropriately powered randomised controlled trial. TRIAL REGISTRATION: ISRCTN: ISRCTN25476759


BACKGROUND: The most efficient sexual behavior for HIV transmission is unprotected receptive anal intercourse. However, it is unclear what role heterosexual unprotected anal sex is playing in the world's worst HIV epidemics of southern Africa. The objective is to examine the prevalence of heterosexual unprotected anal intercourse among men and women who drink at informal alcohol serving establishments (shebeens) in South Africa. METHODS: Cross-sectional surveys were collected from a convenience sample of 5037 patrons of 10 shebeens in a peri-urban township of Cape Town, South Africa. Analyses concentrated on establishing the rates of unprotected anal intercourse practiced by men and women as well as the factors associated with practicing anal intercourse. RESULTS: We found that 15% of men and 11% of women reported anal intercourse in the previous month, with 8% of men and 7% of women practicing any unprotected anal intercourse. Multiple logistic regression showed that younger age, having primary and casual sex partners, and meeting sex partners at shebeens were independently associated with engaging in anal intercourse. Mathematical modeling showed that individual risks are significantly impacted by anal intercourse but probably not to the degree needed to drive a generalized HIV epidemic. CONCLUSIONS: Anal intercourse likely plays a significant role in HIV infections among a small minority of South Africans who patronize alcohol serving establishments. Heterosexual anal intercourse, the most risky sexual behavior for HIV transmission, should not be ignored in HIV prevention for South African heterosexuals. However, this relatively infrequent behavior should not become the focus of prevention efforts


BACKGROUND: Little research has assessed the degree of severity and ordering of different types of sexual behaviors for HIV/STI infection in a measurement scale. The purpose of this study
was to apply the Rasch model on psychometric assessment of an HIV/STI sexual risk scale among men who have sex with men (MSM). METHODS: A cross-sectional study using respondent driven sampling was conducted among 351 MSM in Shenzhen, China. The Rasch model was used to examine the psychometric properties of an HIV/STI sexual risk scale including nine types of sexual behaviors. RESULTS: The Rasch analysis of the nine items met the unidimensionality and local independence assumption. Although the person reliability was low at 0.35, the item reliability was high at 0.99. The fit statistics provided acceptable infit and outfit values. Item difficulty invariance analysis showed that the item estimates of the risk behavior items were invariant (within error). CONCLUSIONS: The findings suggest that the Rasch model can be utilized for measuring the level of sexual risk for HIV/STI infection as a single latent construct and for establishing the relative degree of severity of each type of sexual behavior in HIV/STI transmission and acquisition among MSM. The measurement scale provides a useful measurement tool to inform, design and evaluate behavioral interventions for HIV/STI infection among MSM.


BACKGROUND: Structural factors are known to affect individual risk and vulnerability to HIV. In the context of an HIV prevention programme for over 60,000 female sex workers (FSWs) in south India, we developed structural interventions involving policy makers, secondary stakeholders (police, government officials, lawyers, media) and primary stakeholders (FSWs themselves). The purpose of the interventions was to address context-specific factors (social inequity, violence and harassment, and stigma and discrimination) contributing to HIV vulnerability. We advocated with government authorities for HIV/AIDS as an economic, social and developmental issue, and solicited political leadership to embed HIV/AIDS issues throughout governmental programmes. We mobilised FSWs and appraised them of their legal rights, and worked with FSWs and people with HIV/AIDS to implement sensitization and awareness training for more than 175 government officials, 13,500 police and 950 journalists. METHODS: Standardised, routine programme monitoring indicators on service provision, service uptake, and community activities were collected monthly from 18 districts in Karnataka between 2007 and 2009. Daily tracking of news articles concerning HIV/AIDS and FSWs was undertaken manually in selected districts between 2005 and 2008. RESULTS: The HIV prevention programme is now operating at scale, with over 60,000 FSWs regularly contacted by peer educators, and over 17,000 FSWs accessing project services for sexually transmitted infections monthly. FSW membership in community-based organisations has increased from 8,000 to 37,000, and over 46,000 FSWs have now been referred for government-sponsored social entitlements. FSWs were supported to redress > 90% of the 4,600 reported incidents of violence and harassment reported between 2007-2009, and monitoring of news stories has shown a 50% increase in the number of positive media reports on HIV/AIDS and FSWs. CONCLUSIONS: Stigma, discrimination, violence, harassment and social equity issues are critical concerns of FSWs. This report demonstrates that it is possible to address these broader structural factors as part of large-scale HIV prevention programming. Although assessing the impact of the various components of a structural intervention on reducing HIV vulnerability is difficult, addressing the broader structural factors contributing to FSW vulnerability is critical to enable these vulnerable women to become sufficiently empowered to adopt the safer sexual behaviours which are required to respond effectively to the HIV epidemic.

http://www.ncbi.nlm.nih.gov/pubmed/22296085


(5) GREEN M. Cod liver oil and tuberculosis. BMJ. 2011, vol. 343, p.d7505


BACKGROUND: Tuberculosis (TB) has increased within the UK and, in response, targets for TB control have been set and interventions recommended. The question was whether these had been implemented and, if so, had they been effective in reducing TB cases. METHODS: Epidemiological data were obtained from enhanced surveillance and clinics. Primary care trusts or TB clinics with an average of > 100 TB cases per year were identified and provided reflections on the reasons for any change in their local incidence, which was compared to an audit against the national TB plan. RESULTS: Access to data for planning varied (0-22 months). Sputum smear status was usually well recorded within the clinics. All cities had TB networks, a key worker for each case, free treatment and arrangements to treat HIV co-infection. Achievement of targets in the national plan correlated well with change in workload figures for the commissioning organizations (Spearman's rank correlation R = 0.8, P < 0.01) but not with clinic numbers. Four cities had not achieved the target of one nurse per 40 notifications (Birmingham, Bradford, Manchester and Sheffield). Compared to other cities, their loss to follow-up during treatment was usually > 6% (chi2 = 4.2, P < 0.05), there was less TB detected by screening and less outreach. Manchester was most poorly resourced and showed the highest rate of increase of TB. Direct referral from radiology, sputum from primary care and outreach workers were cited as important in TB control. CONCLUSION: TB control programmes depend on adequate numbers of specialist TB nurses for early detection and case-holding. Please see related article:
http://www.biomedcentral.com/1741-7015/9/127

http://www.ncbi.nlm.nih.gov/pubmed/22100853

BACKGROUND: Since 1953, through the cooperation of state and local health departments, the U.S. Centers for Disease Control and Prevention (CDC) has collected information on incident cases of tuberculosis (TB) disease in the United States. In 2009, TB case rates declined -11.4%, compared to an average annual -3.8% decline since 2000. The unexpectedly large decline raised concerns that TB cases may have gone unreported. To address the unexpected decline, we examined trends from multiple sources on TB treatment initiation, medication sales, and laboratory and genotyping data on culture-positive TB. METHODS: We analyzed 142,174 incident TB cases reported to the U. S. National Tuberculosis Surveillance System (NTSS) during January 1, 2000-December 31, 2009; TB control program data from 59 public health reporting areas; self-reported data from 50 CDC-funded public health laboratories; monthly electronic prescription claims for new TB therapy prescriptions; and complete genotyping results available for NTSS cases. Accounting for prior trends using regression and time-series analyses, we calculated the deviation between observed and expected TB cases in 2009 according to patient and clinical characteristics, and assessed at what point in time the deviation occurred. RESULTS: The overall deviation in TB cases in 2009 was -7.9%, with -994 fewer cases reported than expected (P < .001). We ruled out evidence of surveillance underreporting since declines were seen in states that used new software for case reporting in 2009 as well as states that did not, and we found no cases unreported to CDC in our examination of over 5400 individual line-listed reports in 11 areas. TB cases decreased substantially among both foreign-born and U.S.-born persons. The unexpected decline began in late 2008 or early 2009, and may have begun to reverse in late 2009. The decline was greater in terms of case counts among foreign-born than U.S.-born persons; among the foreign-born, the declines were greatest in terms of percentage deviation from expected among persons who had been in the United States less than 2 years. Among U.S.-born persons, the declines in percentage deviation from expected were greatest among homeless persons and substance users. Independent information systems (NTSS, TB prescription claims, and public health laboratories) reported similar patterns of declines. Genotyping data did not suggest sudden decreases in recent transmission. CONCLUSIONS: Our assessments show that the decline in reported TB was not an artifact of changes in surveillance methods; rather, similar declines were found through multiple data sources. While the steady decline of TB cases before 2009 suggests ongoing improvement in TB control, we were not able to identify any substantial change in TB control activities or TB transmission that would account for the abrupt decline in 2009. It is possible that other multiple causes coincident with economic recession in the United States, including decreased immigration and delayed access to medical care, could be related to TB declines. Our findings underscore important needs in addressing health disparities as we move towards TB elimination in the United States


BACKGROUND: Childhood tuberculosis (TB) has been neglected in the fight against TB. Despite implementation of Directly Observed Treatment Shortcourse (DOTS) program in public and private hospitals in Indonesia since 2000, the burden of childhood TB in hospitals was largely unknown. The goals of this study were to document the caseload and types of childhood TB in the 0-4 and 5-14 year age groups diagnosed in DOTS hospitals on Java Island, Indonesia. METHODS: Cross-sectional study of TB cases recorded in inpatient and outpatient registers of 32 hospitals. Cases were analyzed by hospital characteristics, age groups, and types of TB. The number of cases reported in the outpatient unit was compared with that recorded in the TB register. RESULTS: Of 5,877 TB cases in the inpatient unit and 15,694 in the outpatient unit, 11% (648) and 27% (4,173) respectively were children. Most of the childhood TB cases were under five years old (56% and 53% in the inpatient and outpatient clinics respectively). The proportion of smear positive TB was twice as high in the inpatient compared to the outpatient units (15.6% vs
8.1%). Extra-pulmonary TB accounted for 15% and 6% of TB cases in inpatient and outpatient clinics respectively. Among children recorded in hospitals only 1.6% were reported to the National TB Program. CONCLUSION: In response to the high caseload and gross under-reporting of childhood TB cases, the National TB Program should give higher priority for childhood TB case management in designated DOTS hospitals. In addition, an international guidance on childhood TB recording and reporting and improved diagnostics and standardized classification is required


Public-private partnerships (PPP) for improving the health of populations are currently attracting attention in many countries with limited resources. The Public-Private Mix for Tuberculosis Control is an example of an internationally supported PPP that aims to engage all providers, including hospitals, to implement standardized diagnosis and treatment. This paper explores mainly the local actors' views and experiences of the process of PPP in delivering TB care in hospitals in Yogyakarta Province, Indonesia. The study used a qualitative research design. By maximum variation sampling, 33 informants were purposefully selected. The informants were involved in the Public-Private Mix for Tuberculosis Control in Yogyakarta Province. Data were collected during 2008-2009 by in-depth interview and analyzed using content analysis techniques. Triangulation, reference group checking and peer debriefing were conducted to improve the trustworthiness of the data. This analysis showed that the process of partnership was dynamic. In the early phase of partnership, the National Tuberculosis Program and hospital actors perceived barriers to interaction such as low enthusiasm, lack of confidence, mistrust and inequality of relationships. The existence of an intermediary actor was important for approaching the National Tuberculosis Program and hospitals. After intensive interactions, compromises and acceptance were reached among the actors and even enabled the growth of mutual respect and feelings of programme ownership. However, the partnership faced declining interactions when faced with scarce resources and weak governance. The strategies, power and interactions between actors are important aspects of the process of collaboration. We conclude that good partnership governance is needed for the partnership to be effective and sustainable